

APPENDIX 4.1-1B

*Land Exchange Alternative
Preserve Edge Plan*

Preserve Edge Plan

OTAY RANCH VILLAGE 14 AND PLANNING AREAS 16/19 – LAND EXCHANGE EIR ALTERNATIVE

Specific Plan – Appendix 1 February 2018

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I. INTRODUCTION

The County of San Diego MSCP Plan (1997) (MSCP County Subarea Plan) implements the MSCP Plan within the unincorporated areas of the County of San Diego and encompasses 252,132 acres. The MSCP County Subarea Plan and Implementing Agreement (IA) incorporated the Otay Ranch Resource Management Plan (RMP) into the MSCP Plan. The RMP and the 11,375-acre Otay Ranch RMP Preserve (RMP Preserve) serve as mitigation of biological impacts identified in the Otay Ranch GDP/SRP Final Program EIR (Otay Ranch PEIR (City of Chula Vista and County of San Diego 1993c); IA Section 10.5.2). The Otay Ranch RMP Preserve is a hardline preserve system included in the MSCP Subregional Preserve and includes land reserved for mitigation¹ for impacts to sensitive resources as a result of Otay Ranch development.

In conjunction with the adoption of the Otay Ranch General Development Plan/Otay Subregional Plan (Otay Ranch GDP/SRP) on October 28, 1993, the County Board of Supervisors adopted the Otay Ranch General Plan Amendment, GPA 92-04. The Board of Supervisors also adopted Policy I-109 which states:

It is the policy of the Board of Supervisors that Otay Ranch Associated Documents listed below, all on file with the Clerk of the Board of Supervisors and identified by the Document Numbers indicated below, shall be used in the preparation of plans, reports and other documents for the Otay Ranch project; County decision-makers and staff shall assure that applications submitted for the development portions of the Otay Ranch project are consistent with these Associated Documents:

- Mitigation Monitory Program (Doc. No. 759220)
- Resource Management Plan (Doc. No. 759221)
- Village Phasing Plan (Doc. No. 759222)
- Facility Implementation Plan (Doc. No. 759223)
- Service/Revenue Plan (Doc. No. 759224)

The Otay Ranch RMP requires preparation of a Preserve Edge Plan “for all SPAs that contain areas adjacent to the Preserve.” (1993 RMP, Chapter 3, Page 114). The Preserve Edge Plan for Otay Ranch Village 14 and Planning Areas 16/19 – Land Exchange EIR (Land Exchange Alternative) complies with the Otay Ranch Resource Management Plan (RMP) (1993 RMP, Chapter 3).

To provide further guidance relating to the content of the Preserve Edge Plan, the MSCP County Subarea Plan contains guidelines related to land use adjacency and implementation of fuel modification zones. See Section 1.10 Land Uses Adjacent to the Preserve; Section 1.11, Fuel Modification Zones; and Section 3.4, Land Use Adjacent to the Preserve. The Otay Ranch GDP/SRP, Chapter 10, Section B. 7. Resource Preserve – Adjacent Land Uses, also provides guidance regarding the purpose of the Preserve Edge Plan. Applicable Otay

¹ The Proposed Project may be required to meet additional mitigation requirements. See EIR section 4.1.4. – Biological Resources, for additional details.

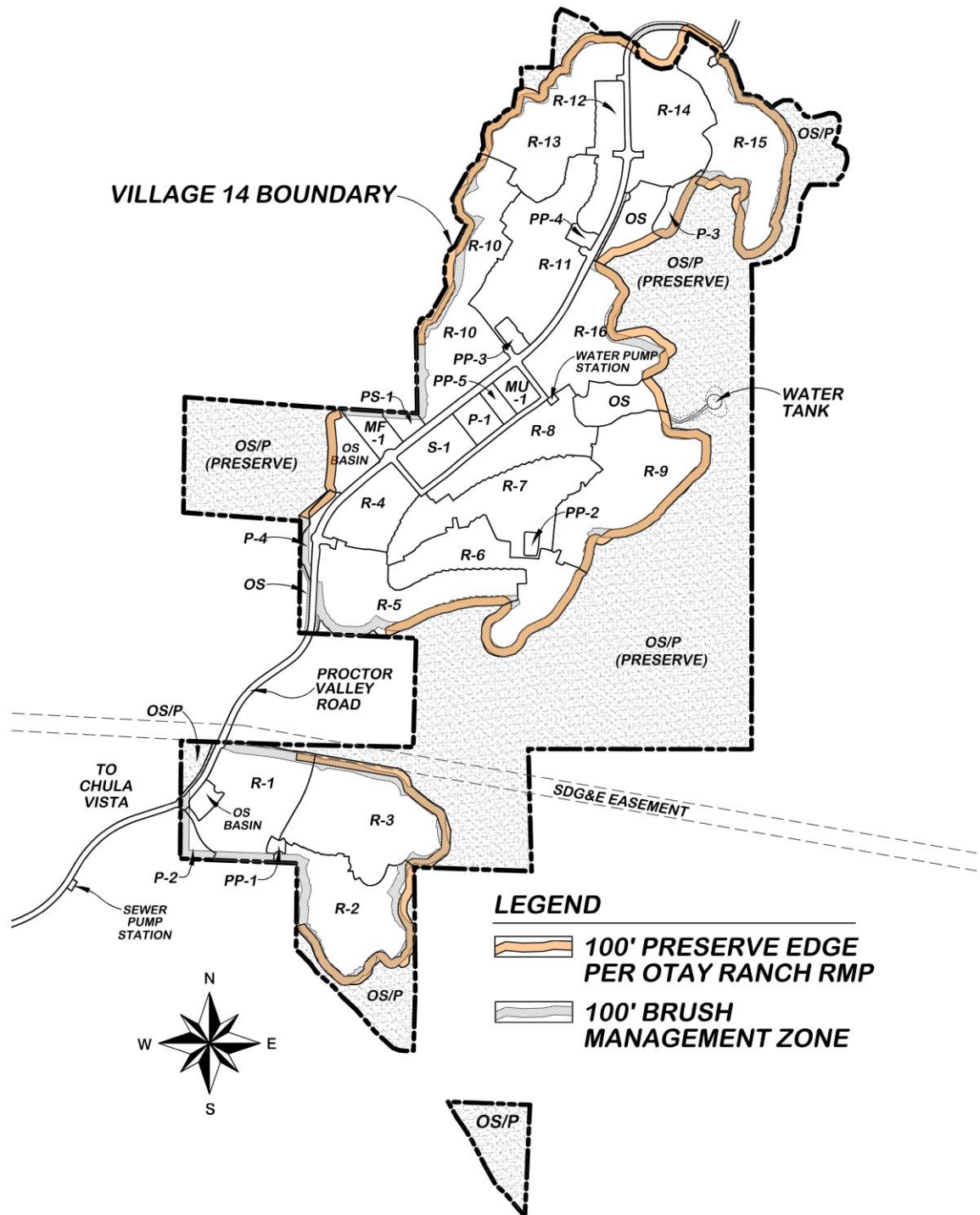
PRESERVE EDGE PLAN

Otay Ranch Village 14 and Planning Areas 16/19 – Land Exchange EIR Alternative

Ranch GDP/SRP, RMP and MSCP County Subarea Plan policies are summarized and evaluated below.

Refer to Exhibit 1 for Development Areas Subject to the Preserve Edge Plan requirements. Refer to Exhibit 2, Village 14 Context, for a depiction of the jurisdictional and ownership context along the perimeter of the Village 14 Development Area. Development Areas adjacent to the City of San Diego MSCP Cornerstone Lands are described in Section E – City of San Diego MSCP Land Use Adjacency Guideline Compliance. See the Otay Ranch Village 14 and Planning Areas 16/19 – Land Exchange EIR Alternative Biological Resources Technical Report (Dudek 2017) regarding planned and future facility analyses.



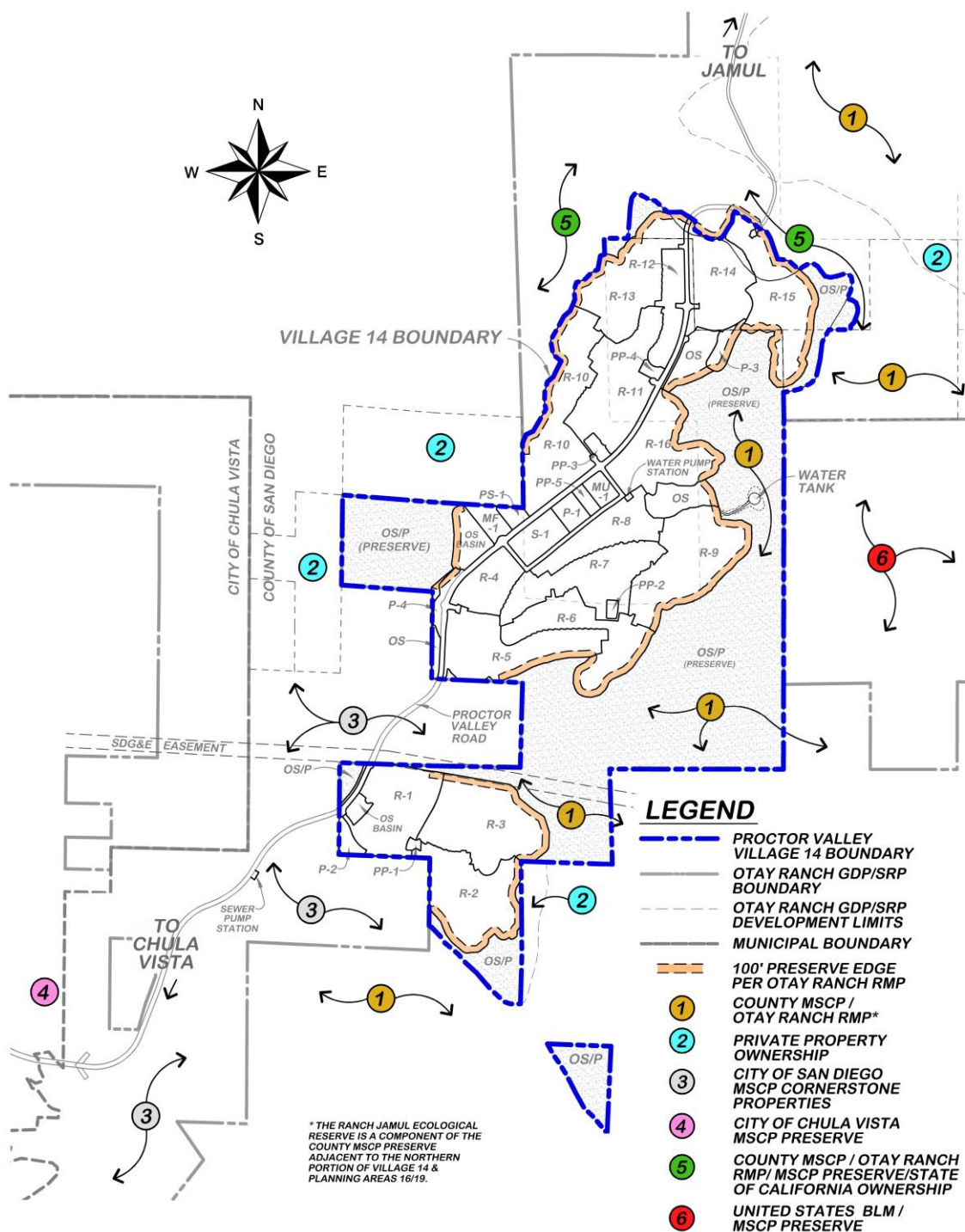


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Exhibit 1 – Development Areas Subject to the Otay Ranch RMP Preserve Edge Plan Requirements

PRESERVE EDGE PLAN

Otay Ranch Village 14 and Planning Areas 16/19 - Land Exchange EIR Alternative



01-30-18

Exhibit 2 – Village 14 Context

II. FACILITIES PROPOSED WITHIN THE 100-FOOT RMP PRESERVE EDGE

The following excerpt from the MSCP County Subarea Plan, Chapter 1, Section 1.10 *Land Uses Adjacent to the Preserve* is provided to guide the land uses that are appropriate adjacent to the RMP Preserve:

“Residential uses will be the most common uses located adjacent to the preserve, although roads, manufactured open space, recreational facilities, and industrial and commercial uses will occur in some areas. The following section establishes guidelines for those uses that are compatible with the preserve. The subsequent section (1.11), along with area specific management directives outlined in the subsequent chapters, establishes a brush management zone that will separate the preserve from developed uses.

The following uses are also allowed on land adjacent to the preserve with no limitations other than subject to the guidelines listed in paragraphs A-E below:

Manufactured open space (e.g. parks, paying fields, vegetated slopes, green belts, etc.) roads, recreational facilities, water reservoirs, other public facilities and utilities, agricultural and grazing operations are deemed to be compatible when located immediately adjacent to the preserve. No additional buffers or transitional areas are required.

In addition, hiking, bird watching, horseback riding, camping, power boating, water skiing, fishing pet exercising, hang gliding, hot air ballooning, scientific research, mountain biking, equestrian facilities, athletic fields, sailing, sun bathing, swimming, golf courses, hunting, brush management are also compatible uses.

The following guidelines will be used when planning and implementing uses and activities when located immediately adjacent to the preserve. These guidelines are meant to ensure compatibility with the preserve.

- A. Where feasible, plant materials used to landscape manufactured open space, road cut/fills and recreational facilities should consist of native species similar/compatible with the adjacent habitat in the preserve. If possible, those species will be based on plants with genetic materials of the area.
- B. Areas and structures subject to heavy human use (e.g. ball fields, parking lots, hardscapes/playing courts, equestrian centers, staging areas, etc.) shall, to the extent feasible, be located away from the edge of the preserve.
- C. Lighting within 100 feet of the preserve edge shall be confined to areas necessary to ensure public safety, and shall be limited to low

pressure sodium fixtures, shielded and directed away from the preserve where possible.

- D. Fencing along the preserve boundary is desirable but not mandatory and may provide a barrier to fire, invasive species, and uncontrolled human access. Should a landowner or preserve manager decide to install fencing, the type, style and height must conform to existing regulations or those included in the Applicable Specific Plan.
- E. There shall be no requirements for buffers outside the preserve system. All open space requirements for the preserve system shall be incorporated into the preserve system.

The following excerpt from the Otay Ranch Resource Management Plan, Chapter 3, Goals, Objectives, Policies of the RMP is provided to guide the land uses proposed that are appropriate adjacent to the Preserve:

OBJECTIVE 7 – RESOURCE PRESERVE – ADJACENT LAND USES

Identify allowable uses within appropriate land use designations for areas adjacent to the Preserve.

Policy 7.1

All development plans adjacent to the edge of the Preserve shall be subject to review and comment by the Preserve Owner/Manager, the City of Chula Vista, and the County of San Diego to assure consistency with resource protection objectives and policies.

Policy 7.2

The “edge” of the Preserve is a strip of land 100 feet wide that surrounds the perimeter of the Preserve. It is not a part of the Preserve – it is a privately or publicly owned area included in lots within the urban portion of Otay Ranch immediately adjacent to the Preserve.

Standard: “Edge Plans” shall be developed for all SPAs that contain areas adjacent to the Preserve.

Guidelines:

- 1) The edge plans shall be prepared in consultation with a qualified biologist to ensure that proposed land uses will not adversely affect resources with the Preserve.
- 2) The edge plan shall include a list of plant species that may and may not be used for landscaping within the edge.
- 3) Fuel modification zones may be incorporated into the edge.
- 4) Development adjacent to the edge shall be restricted to development types that are least likely to impact specific adjacent biological resources.
- 5) Landscaping or block walls shall be used in appropriate areas adjacent to the edge to reduce impacts of noise and light.

Otay Ranch Village 14 and Planning Areas 16/19 – Land Exchange EIR Alternative

- 6) No structures other than fencing and walls shall be allowed, and those shall be built and landscaped in such a way as to minimize visual impacts on the Preserve and the OVRP.

Policy 7.3

Protect and maintain biological integrity of unconveyed land adjacent to developing SPAs.

Standards:

- 1) Provide temporary fencing around perimeter sensitive habitat areas and/or areas occupied by sensitive species adjacent to any SPA under construction to inhibit encroachment by construction traffic, etc.
- 2) Phase construction of SPAs immediately adjacent to sensitive biological resources to avoid indirect impacts. For example, construction activities that equal or exceed volume levels that inhibit breeding and nesting activities of the California gnatcatcher should be curtailed during the nesting period of the bird.

Consistent with the RMP and MSCP County Subarea Plan, facilities, including portions of public parks, residential streets, biofiltration basins, storm drain inlets/outlets, a box culvert, a water line and maintenance/access road to an Otay Water District water tank, an easement for future trail access and canyon subdrains are proposed within the 100' Preserve Edge as described below. The 100' Fuel Modification Zone is also proposed within portions of the 100' Preserve Edge. Facilities and improvements proposed within the 100' Preserve Edge are described in greater in the following sections.

A. PUBLIC NEIGHBORHOOD PARK (P-3)

Village 14 includes four public parks (P-1, P-2, P-3 and P-4). Because of their physical location, the P-1 and P-2 Parks are not subject to the Preserve Edge Plan. The P-3 Park is a public neighborhood park located in North Village14. The conceptual design includes active recreation facilities based on a contemplative park design theme. The portion of the P-3 Park within the 100' Preserve Edge is comprised of landscaped lawn and planter areas, manufactured slopes, walkways, benches, a drop off area and a portion of the parking lot (refer to Exhibit 3). A post and rail fence is planned along the perimeter of the park to control access and to preserve views out of and into the park. There are no structures located within the 100' Preserve Edge.

The entire park is subject to the fuel modification requirements described in Section C.7. Fuel Modification Zones and established in the Otay Ranch Village 14 and Planning Areas 16/19 – Land Exchange EIR Alternative Fire Protection Plan (FPP).

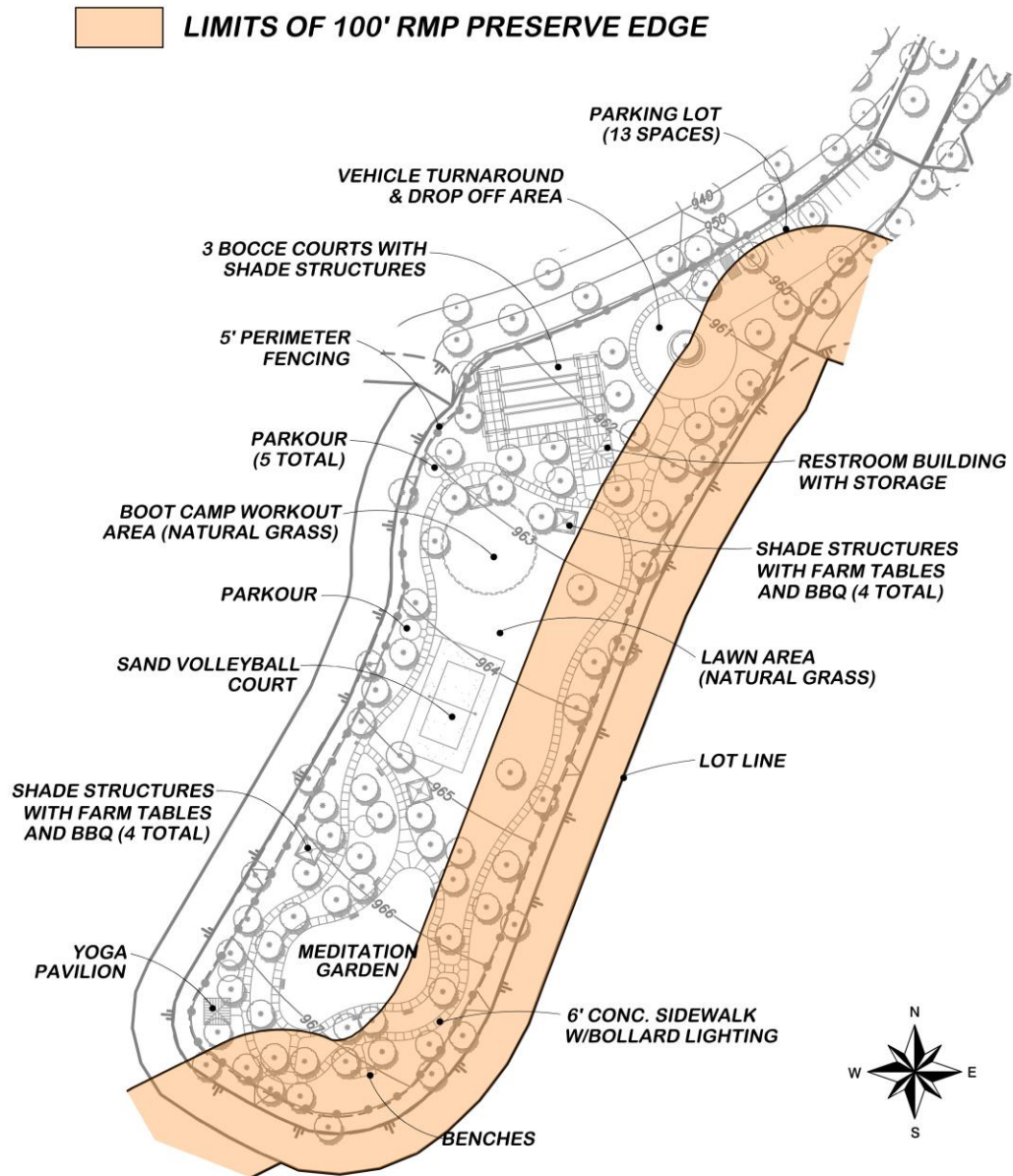


Exhibit 3 - P-3 Concept Plan

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B. PUBLIC NEIGHBORHOOD PARK (P-4)

The P-4 Park is a public neighborhood park located in Central Village 14. The conceptual design includes active recreation facilities, based on an active wellness park design theme. The northern portion of the P-4 Park is adjacent to the RMP Preserve and is therefore subject to the Preserve Edge Plan requirements. The P-4 Concept plan has been designed to orient active uses away from the RMP Preserve to the greatest extent possible, given site design constraints. The portion of the P-4 Park within the 100' Preserve Edge is comprised of landscaped lawn and planter areas, manufactured slopes (refer to Exhibit 4). A 20' wide storm drain easement is located along the eastern edge of the park, crosses through the park and connects to a 20' wide easement containing the storm drain outlet within the 100' Preserve Edge. A post and rail fence is planned at the perimeter of the park to control access and to preserve views out of and into the park. There are no structures located within the 100' Preserve Edge.

The entire P-4 Park is subject to the fuel modification requirements described in Section C.7 – Fuel Modification Zones and established in the FPP.

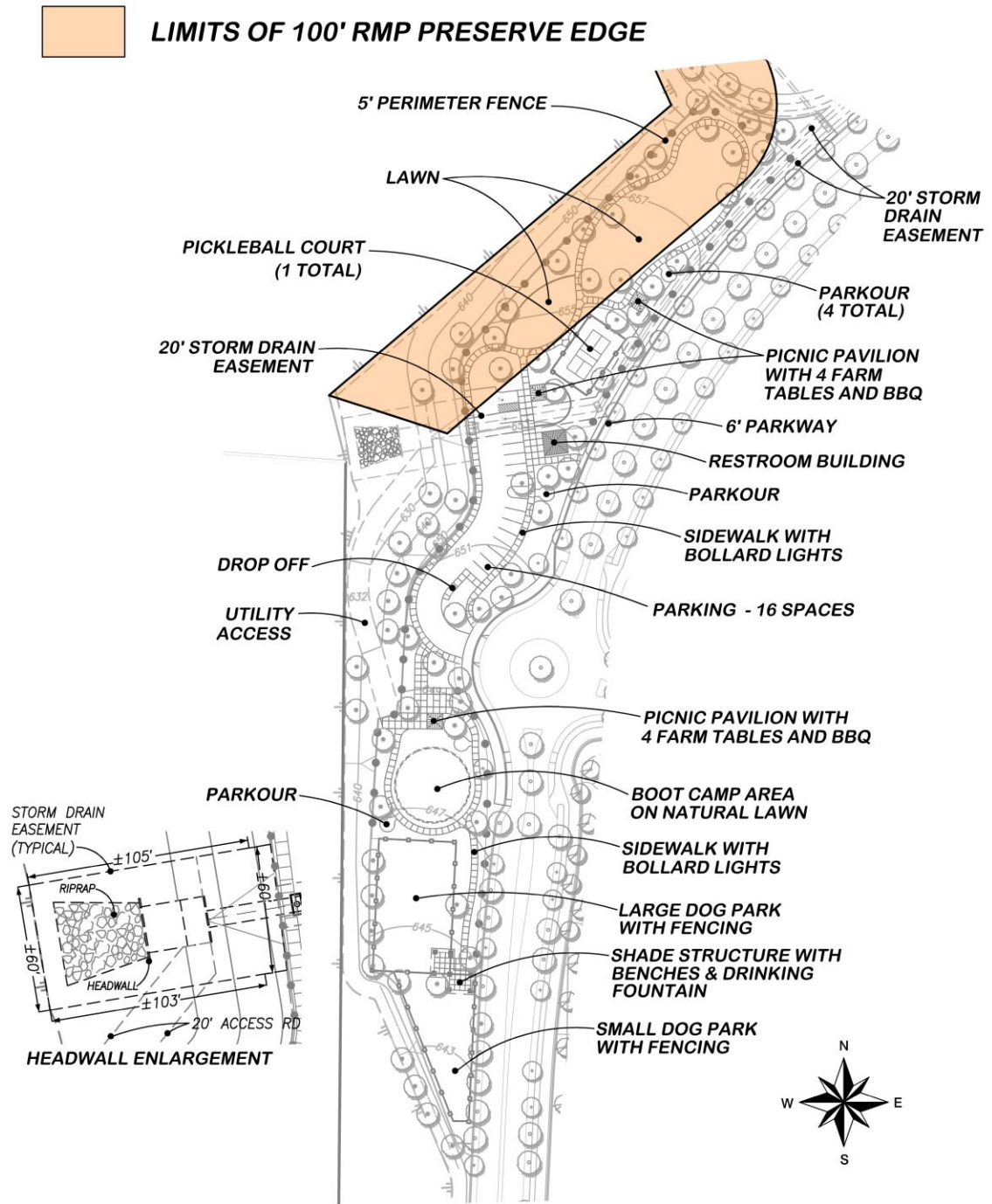


Exhibit 4 - P-4 Concept Plan

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C. MODIFIED RESIDENTIAL COLLECTOR (STREETS "A" & "N")

A Modified Residential Collector street is proposed within the 100' Preserve Edge in South Village 14 in two locations at the entries to single family neighborhoods R-1 and R-2. No driveway cuts are planned along these roadways. Improvements include two travel lanes, landscaped parkways, sidewalks and a rock-lined swale. Post and rail fencing will be provided outside the right-of-way, behind the sidewalk, adjacent to the RMP Preserve (refer to Exhibit 5). Appropriate signage will be posted notifying the public of RMP Preserve access restrictions.

Standard streetlights are also proposed along these residential streets. Lighting must be shielded and directed away from the RMP Preserve to avoid light spillage into the Preserve to the greatest extent possible.

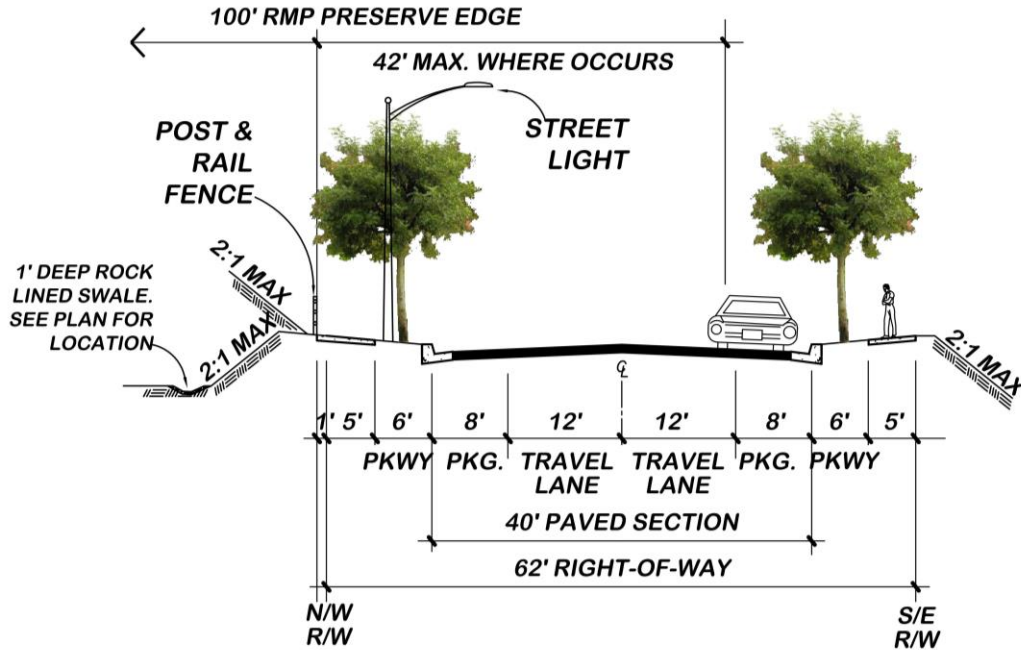


Exhibit 5 - **Modified Residential Collector (Street "A" and Street "N**

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D. WATER LINE AND STORAGE TANK MAINTENANCE / ACCESS ROAD

A portion of a maintenance and access road is proposed within the 100' Preserve Edge along the western edge of the Central Village 14 to access the planned Otay Water District 980 Zone waterline and storage tank (refer to Exhibit 6a). The road is graded to a 24-foot width with 20 feet of asphalt surface improvements and two-foot shoulders on each side. A security gate will be installed at the access driveway within neighborhood R-15. The waterline will be co-located within the paved roadway easement. Road-adjacent slopes must be planted with non-invasive, native plant materials, consistent with the existing surrounding natural vegetation (refer to Attachment A, Approved Plant List).

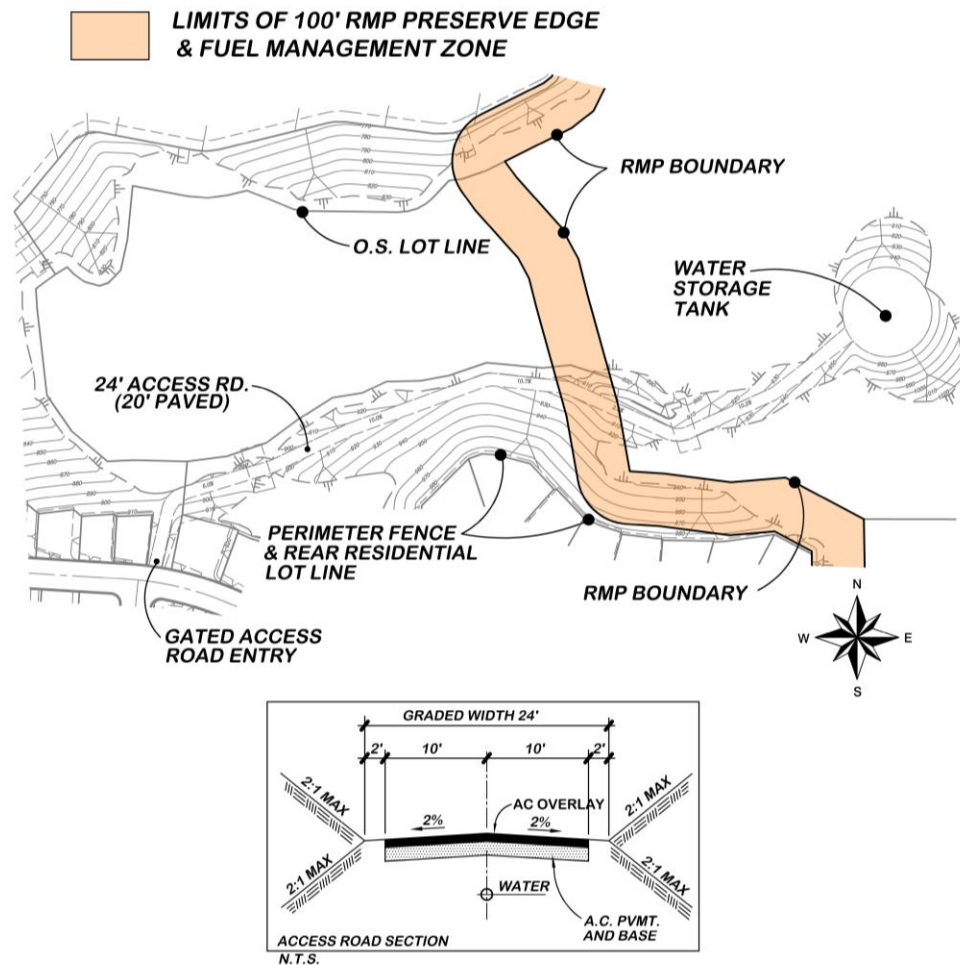


Exhibit 6a – OWD 980 Storage Tank/ Waterline Maintenance / Access Road
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E. EASEMENT FOR POTENTIAL TRAIL ACCESS

The Land Exchange Alternative includes an easement for potential trail access that provides a pedestrian connection from the private pocket park (PPP-4) within Central Village 14 to potential unimproved trail within the RMP Preserve. A portion of this easement and the associated improvements are within the Preserve Edge and include, a six to eight-foot-wide easement, post and rail fencing and appropriate signage. Refer to Exhibit 6b, Easement for Potential Trail Access details.

The Land Exchange Alternative includes an internal circulation option for Village 14, the Perimeter Trail Option. The Trail Easement would provide a pedestrian connection to the Perimeter Trail Option, if the Perimeter Trail Option is approved by the County. Portions of the Perimeter Trail Option would be within the 100' Preserve Edge in South and Central Village 14. The Perimeter Trail Option would be comprised of a 4 to 8-foot graded width with a 2 to 6-foot natural soil surface trail tread. Retaining walls (3' to 7' high) (refer to Exhibit 13, Typical Fence & Wall Details) associated with the Perimeter Trail Option would be located within the 100' Preserve Edge. Post and rail fencing to be provided where necessary based on final engineering design. See Land Exchange Specific Plan, VIII. Internal Circulation Options for additional details.

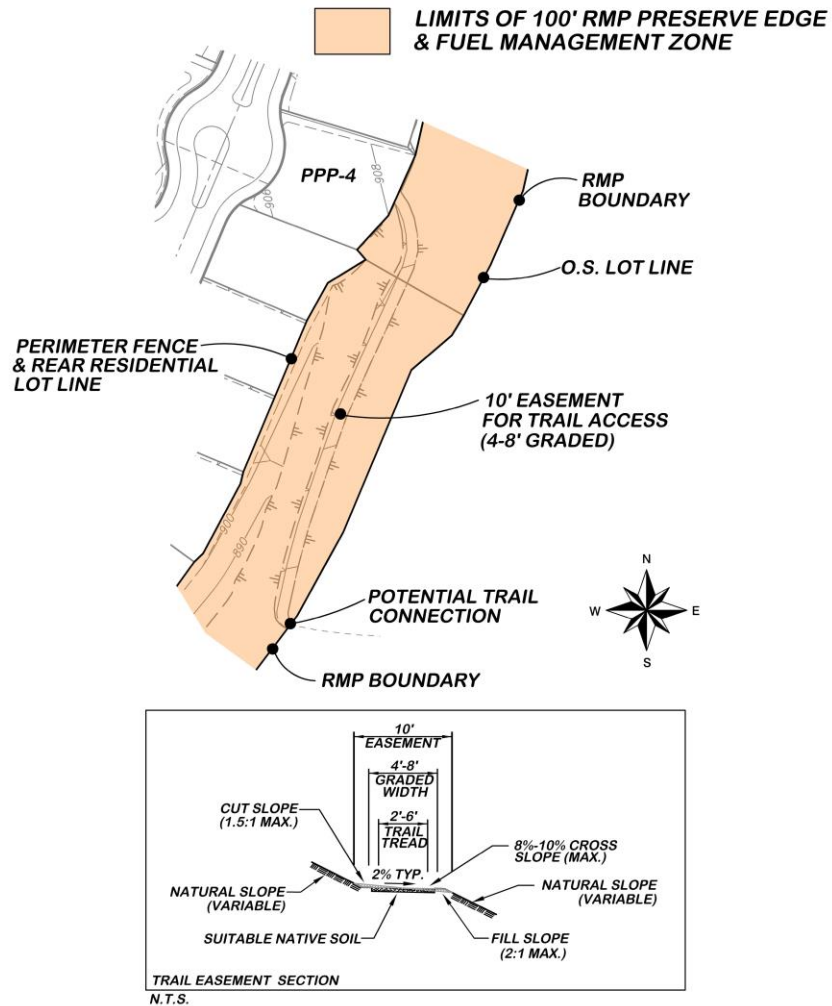


Exhibit 6b – Easement for Potential Trail Access

F. WATER QUALITY AND DRAINAGE FACILITIES

The following section describes the proposed water quality and drainage facilities proposed within the 100' Preserve Edge. These facilities include a biofiltration basin, canyon subdrains and a storm drain outlets and maintenance access roads (refer to Exhibit 7, Conceptual Water Quality and Drainage Facilities, for approximate locations).

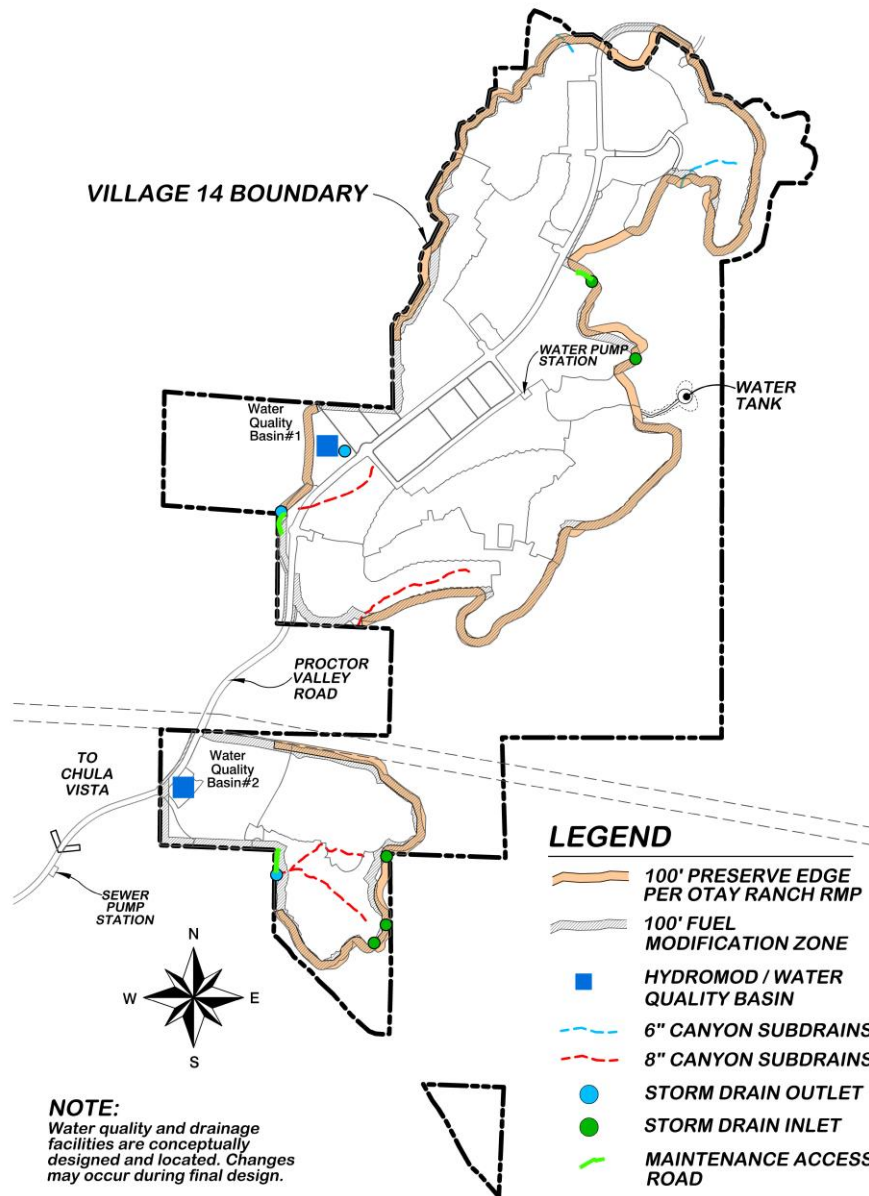


Exhibit 7 – Conceptual Water Quality and Drainage Facilities within the 100' Preserve Edge

1. BIOFILTRATION BASIN

One biofiltration basin (Basin #1) is proposed within the 100' Preserve Edge, adjacent to multi-family neighborhood MF-1. Refer to Exhibit 7 for biofiltration basin locations. This area is comprised of manufactured slopes and a maintenance access road surrounding the biofiltration basin. Planting within the basin and on surrounding slopes, shall be consistent with the Approved Plant List (Attachment A). Access is provided via Proctor Valley Road (refer to Exhibit 8).

Biofiltration basin maintenance activities to be funding through an HOA or County/District. The selected maintenance entity will manage regular and any necessary additional maintenance activities, consistent with the Basin Maintenance Program to be prepared by the Applicant's Civil Engineering during the final engineering phase of the Land Exchange Alternative

Regular maintenance activities are anticipated to occur four times a year (February, May, September and December). Rainy Season (February and December) and Pre-Rainy Season (September) maintenance activities include removal of trash, debris and excess sediment, clear clogged riser orifices and perform biofiltration basin area repairs.

Post-Rainy Season maintenance includes full silt removal from the dry weather storage area, vegetation removal, annual inspections by a registered civil engineer, removal of trash, debris and excess sediment above the dry weather zone, clear clogged riser orifices and perform biofiltration basin area repairs. Additional maintenance may be required following major rainfall events unless the next regularly scheduled maintenance dates are within one month of the rain event. This basin will also be inspected by a third-party fuel modification inspector as part of the annual fuel modification inspection.

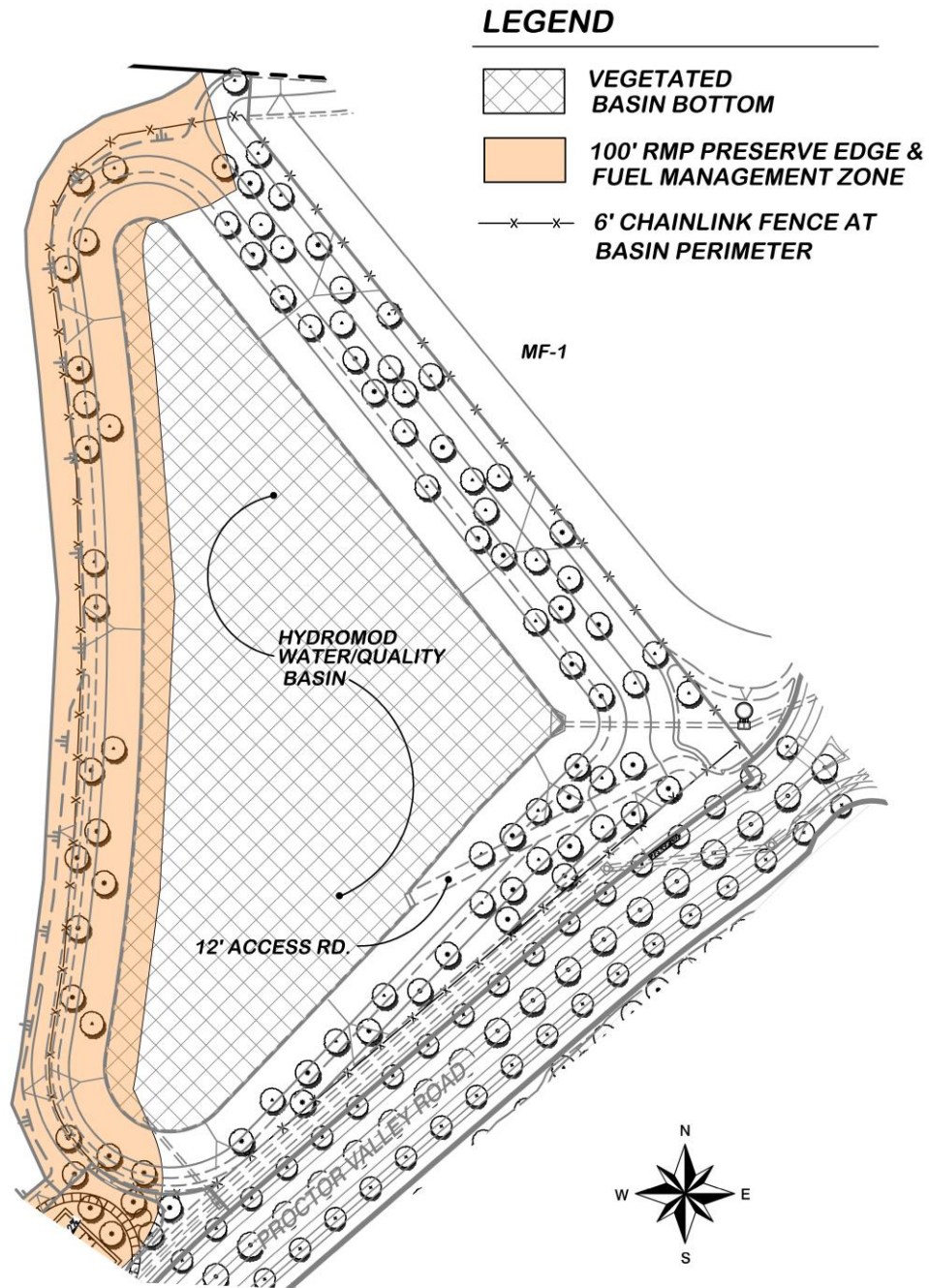


Exhibit 8 - Biofiltration Basin @ Multi-Family MF-1

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2. TYPICAL CANYON SUBDRAIN DESIGN

Canyon subdrains are proposed at the perimeter of the Development Area within the 100' Preserve Edge and completely outside of the RMP Preserve, to meet the current MS-4 requirements. Subdrains are designed to capture sub-surface flows from the Development Area and outlet at the perimeter of the Development Area. One 6" and four 8" canyon drains are proposed within the Land Exchange Alternative (refer to Exhibit 7 for canyon subdrain locations). The subdrain outlet is comprised of a below-grade perforated pipe, solid pipe and headwall. A solid outlet pipe and rip-rap are above-grade. The rip-rap to be 10-20' from the daylight point to the RMP Preserve Boundary (refer to Exhibit 9). The final design and locations of canyon subdrains to be determined during final engineering.

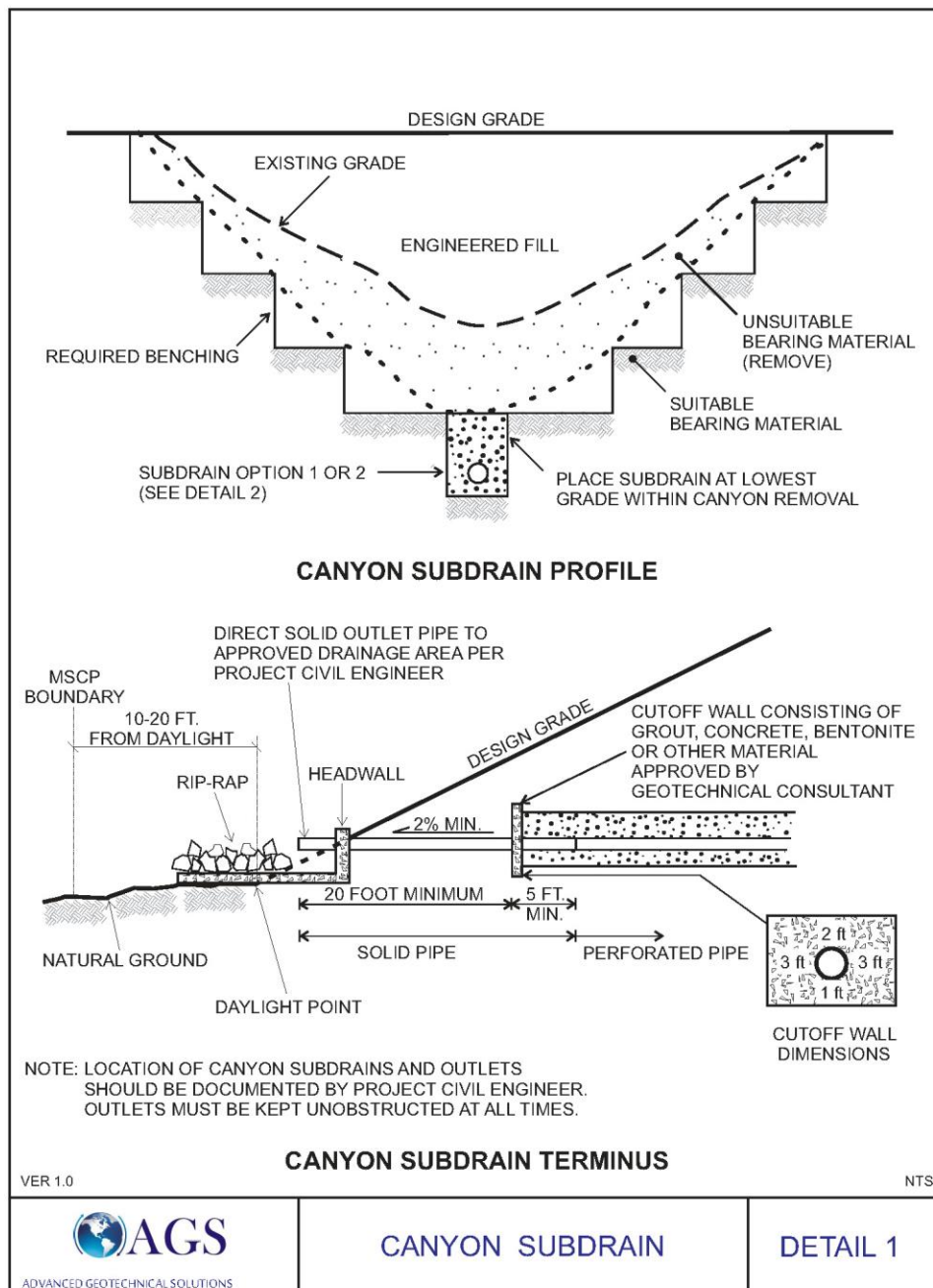


Exhibit 9 – Typical Canyon Subdrain Detail

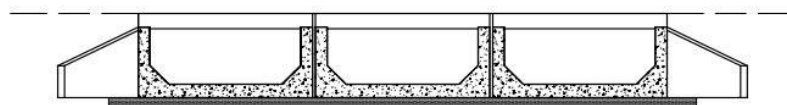
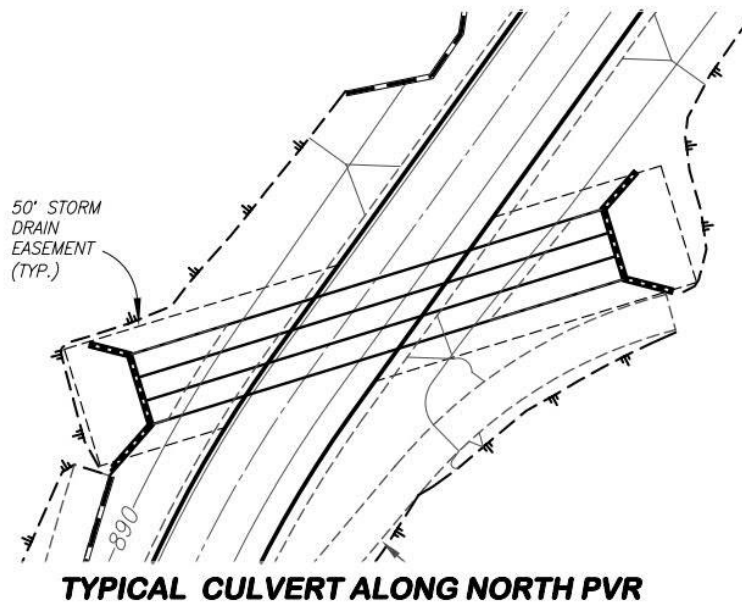
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A storm drain outlet facility is proposed in South Village 14, adjacent to the single-family neighborhood R-2. This facility includes a concrete storm drain outlet with an energy dissipater and a 15'-wide maintenance access easement with a 12' concrete paved access road. A 15'-wide storm drain easement extends from the storm drain outlet through the 100' Preserve Edge and into the adjacent RMP Preserve. Refer to Exhibit 10, Storm Drain Outlet, Easement and Maintenance Access Road.



4. TYPICAL BOX CULVERT

A box culvert crossing Proctor Valley Road is proposed in North Village 14 within the 100' Preserve Edge (refer to Exhibit 11). The box culvert will be constructed consistent with County of San Diego Regional Standard Drawings.



**CULVERT DETAILS AND SPECIFICATIONS WILL BE PER
SAN DIEGO COUNTY REGIONAL STANDARD DRAWINGS
WITH FINAL APPROVAL DURING COUNTY REVIEW OF
ENGINEERING CONSTRUCTION DOCUMENTS**

TYPICAL BOX CULVERT

10-31-17

Exhibit 11 – Typical Box Culvert Design

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5. TYPICAL STORM DRAIN MAINTENANCE ACCESS ROAD

Portions of maintenance access roads are proposed within the 100' Preserve Edge within South, Central and North Village 14. The maintenance access roads will be graded to a 15-foot width bench, with 12 feet of asphalt or concrete surface improvements and two-foot shoulders on each side. Post and rail fencing will be provided where necessary (refer to Exhibit 12). An adjacent "V" ditch will capture flows from the access road and route them to a biofiltration basin for treatment prior to release. The final location of "V" ditches will be determined during final engineering. Road adjacent slopes will be planted with non-invasive native plant materials, consistent with the existing surrounding natural vegetation (refer to Attachment A, Approved Plant List).

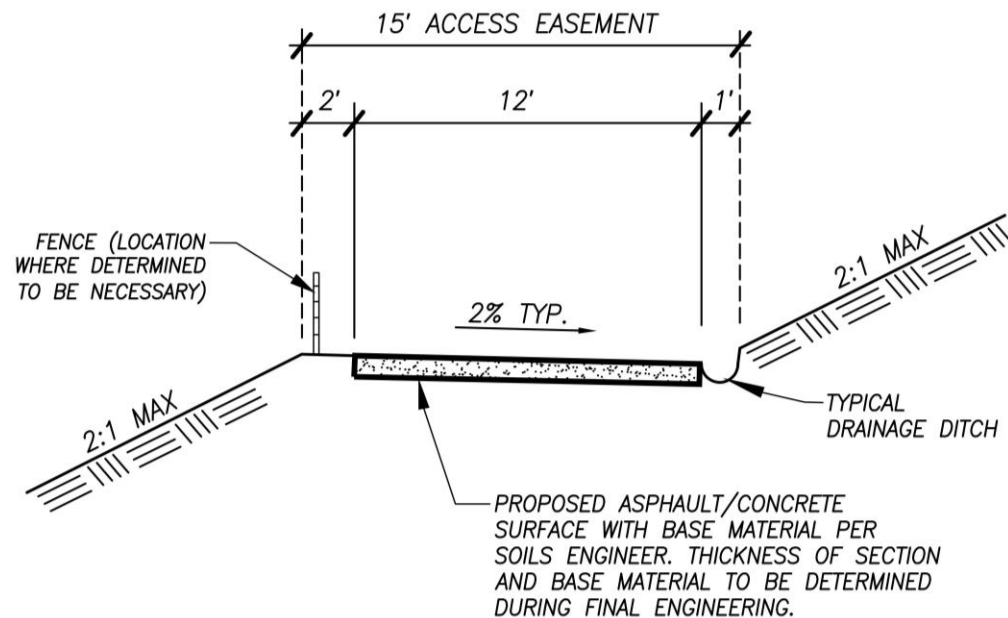


Exhibit 12 – Typical Storm Drain Maintenance Access Road

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III. COMPLIANCE WITH RMP POLICIES AND MSCP COUNTY SUBAREA PLAN GUIDELINES

The following discussion provides a description of Otay Ranch GDP/SRP, RMP and MSCP County Subarea Plan policies, as well as guidelines and proposed compliance. The discussion is divided into adjacency issue areas.

The MSCP County Subarea Plan, Chapter 1, Section 1.10. *Land Uses Adjacent to the Preserve* states, “The following guidelines [A-E] will be used when planning and implementing uses and activities when located immediately adjacent to the preserve. These guidelines are meant to ensure compatibility with the preserve.”

The Otay Ranch RMP, Objective 7 – Resource Preserve Adjacent Land Uses, identifies allowable uses within appropriate land use designations for areas adjacent to the RMP Preserve in Policies 7.1 and 7.2 Guidelines 1-6. In addition, Otay Ranch RMP Policy 7.3 provides guidance intended to minimize/avoid impacts to sensitive resources within the adjacent RMP Preserve during construction.

A. LANDSCAPE MATERIALS

MSCP County Subarea Plan Chapter 1, Section 1.10 - Guideline:

A. Where feasible, plant materials used to landscape manufactured open space, road cuts/fills and recreational facilities should consist of native species similar/compatible with the adjacent habitat in the preserve. If possible, those species should be based on plants with genetic materials of the area.

Otay Ranch RMP (Policy 7.2) Guidelines:

- 1) The edge plan shall be prepared in consultation with a qualified biologist to ensure that proposed land uses will not adversely affect resources within the Preserve.
- 2) The edge plan shall include a list of plant species that may or may not be used for landscaping within the edge.

Compliance

The Approved Plant List (Attachment “A”) has been prepared for the Land Exchange Alternative in consultation with a qualified biologist (Brock Ortega, Dudek) and an urban forester and fire protection planner (Michael Huff, Dudek). The Approved Plant List includes a list of approved plants that may be utilized within the 100’ Preserve Edge. Landscape plans for areas within the 100’ Preserve Edge may not contain invasive species, and must include local native species, consistent with the Approved Plant List. No invasive species will be utilized within or adjacent to storm water structural BMPs that might eventually drain into the RMP Preserve. Landscape areas within the 100’ Preserve Edge including, but not limited to, manufactured slopes, biofiltration basins street-adjacent landscaping and public parks, must comply with the Approved Plant List.

The Approved Plant List is consistent with the FPP requirements, as the 100’ Preserve Edge is also typically within the 100’ Fuel Modification. Any proposal to utilize plant material not listed on the Approved Plant List must be reviewed by a qualified biologist

and reviewed and approved by the County's Landscape Architect and the San Diego County Fire Authority (SDCFA). The area may be planted with container stock (liners) or a hydroseed mix. See the FPP for landscape planting and irrigation requirements.

B. USES WITHIN THE PRESERVE EDGE

MSCP County Subarea Plan (Chapter 1, Section 1.10) Guideline:

B. Areas and structures subject to heavy human uses (e.g. ball fields, parking lots, hardscapes/play courts, equestrian centers, staging areas, etc.) shall, to the extent feasible, be located away from the edge of the preserve.

Otay Ranch RMP (Policy 7.2) Guidelines:

- 4) Development adjacent to the edge shall be restricted to development types that are least likely to impact specific adjacent biological resources.
- 5) Landscaping or block walls shall be used in appropriate areas adjacent to the edge to reduce impacts of noise and light.
- 6) No structures other than fencing and walls shall be allowed, and these shall be built and landscaped in such a way as to minimize visual impacts on the Preserve and [Otay Valley Regional Park Plan] OVRP.

Compliance

The Specific Plan proposes an Active Lifestyle and Wellness recreational theme centered on a comprehensive neighborhood park system that provides a variety of active recreation opportunities. The Specific Plan distributes public and private park facilities throughout Village 14 to ensure park facilities will be located within ½ mile of all residences. There are four public parks within Village 14. The most intensive park, the P-1 Park is in the geographic center of Village 14, along Proctor Valley Road. The P-2 Park is a smaller park planned to meet the active recreation needs of the residents in South Village 14. The P-1 and P-2 Parks are not subject to the Preserve Edge Plan requirements due to their locations within Village 14.

However, two parks, the P-3 and P-4 Parks, are located adjacent to the RMP Preserve and portions of the parks are subject to Preserve Edge Plan requirements. The P-3 Park is designed as a contemplative park located in North Village 14. The more active uses, including bocce courts, a sand volleyball court, a boot camp workout area, parkour stations, as well as a yoga pavilion and shade structures with farm tables which are in the western portion of the park. The portion of the P-3 Park subject to the 100' Preserve Edge requirements includes lawn/landscape areas, concrete walkways, benches, a perimeter fence and a portion of the parking lot and drop off area. There are no structures located within the 100' Preserve Edge (refer to Exhibit 3).

The P-4 Park is in Central Village 14 near the core area. The park includes two fenced dog parks, a boot camp area, restroom/maintenance building, a pickleball court, parkour stations, open lawn areas, a perimeter walkway, a picnic pavilion, perimeter fencing and a parking lot. The portion of the park within the 100' Preserve Edge includes lawn/planter areas, concrete walkways and a portion of the parking lot. A 20' storm drain easement crosses the park. The storm drain headwall is within the 100'

Preserve Edge. There are no structures within the 100' Preserve Edge (refer to Exhibit 4).

Community walls are planned at the perimeter of the Development Area, consistent with the Village 14 and Planning Areas 16/19 – Land Exchange EIR Alternative Acoustical Analysis and the FPP. Perimeter walls are intended to create a barrier between development and the RMP Preserve. Appropriate signage will be posted notifying the public of RMP Preserve Access restrictions (refer to Exhibit 16, Conceptual Fence and Wall/Access Plan).

C. LIGHTING

MSCP County Subarea Plan (Chapter 1, Section 1.10.) Guideline:

C. Lighting within 100 feet of the preserve edge shall be confined to areas necessary to ensure public safety, and shall be limited to low pressure sodium fixtures, shielded and directed away from the preserve where possible.

Otay Ranch RMP (Policy 7.2) Guidelines:

- 1) The edge plan shall be prepared in consultation with a qualified biologist to ensure the proposed land uses will not adversely affect resources within the Preserve.
- 4) Development adjacent to the edge shall be restricted to development types that are least likely to impact specific adjacent biological resources.
- 5) Landscaping or block walls shall be used in appropriate areas adjacent to the edge to reduce impacts of noise and light.

Compliance

The Village 14 Design Plan includes criteria for the design of lighting within the Preserve Edge. Improvement plans for the areas within the 100' Preserve Edge will include shielded lighting designs that avoid spillover light in the RMP Preserve. Lighting Plans and a photometric analysis shall be prepared in conjunction with improvement plans for development areas adjacent to the RMP Preserve to illustrate the location of proposed lighting standards and the type of shielding measures to be implemented. Lighting Plans and accompanying photometric analyses must also be prepared in conjunction with street and other improvements proposed within the Preserve Edge to demonstrate that light spillage into the RMP Preserve is avoided to the greatest extent possible.

Public park hours of operation will be limited to daylight hours and will be enforced and controlled by the County Parks and Recreation Department. Sports fields within public parks will not be lit for nighttime use. All proposed landscape lighting within public parks shall be designed to eliminate light spillage into adjacent RMP Preserve areas. All lighting must comply with the County of San Diego Code of Regulatory Ordinances, 51.201 to 51.209, Light Pollution Code.

D. ACCESS CONTROLS

MSCP County Subarea Plan (Chapter 1, Section 1.10.) Guideline:

D. Fencing along the preserve boundary is desirable but not mandatory and may provide a barrier to fire, invasive species, and uncontrolled human access. Should a landowner or preserve management decide to install fencing, the type, style and height must conform to existing regulations or those included in the applicable Specific Plan.

Otay Ranch RMP (Policy 7.2) Guidelines:

- 5) Landscaping or block walls shall be used in appropriate areas adjacent to the edge to reduce impacts of noise and light.
- 6) No structures other than fencing and walls shall be allowed and those shall be built and landscaped in such a way as to minimize visual impacts on the Preserve and the OVRP.

Compliance:

Pursuant to RMP requirements and MSCP County Subarea Plan guidelines, the Land Exchange Alternative will provide access to the RMP Preserve at designated locations (refer to Exhibit 13, Conceptual Wall & Fencing Plan). Walls and fences will be constructed outside the RMP Preserve, within the Fuel Modification Zone/Preserve Edge and will be maintained by the Master HOA or County landscape monitoring firm. Homeowners may be responsible for maintaining the interior of perimeter walls and fences, pursuant to CC&Rs. Perimeter fencing/walls will be located outside of the watershed, including the watershed of existing vernal pools located within the RMP Preserve.

Access to the Fuel Modification Zone for maintenance and fire protection activities is provided approximately every 1,000' along the perimeter of the Development Area. Refer to Exhibit 13, Conceptual Wall & Fencing Plan. Perimeter walls are intended to create a barrier between development and the RMP Preserve. Appropriate signage will be posted notifying the public of RMP Preserve access restrictions.

An existing Vernal Pool Preserve Area is in the northernmost portion of North Village 14, between Proctor Valley Road and the R-14 and 15 single family neighborhoods. Six-foot solid block walls are planned at the County MSCP boundary/private lot line. Three-strand environmental fencing is planned at the edge of the vernal pool watershed. Controlled access to this RMP Preserve area is provided via Proctor Valley Road. Post and rail fencing is planned along Proctor Valley Road at the northern edge of the vernal pool preserve area. However, in the event the Land Exchange Alternative is approved by the Board of Supervisors, a Tentative Map condition will require Lots 11-18 in R-14 and Lots 22-24 in R-15 to provide a 100' FMZ (provided no vernal pool area is located within the 100' FMZ) or an equivalent combination of FMZ, alternative materials and methods to the satisfaction of the San Diego County Fire Authority. If required, at final engineering a redesign of the lot configuration in these areas to satisfy this condition will be allowed as an administrative approval under the authority of the San Diego County Fire Authority.

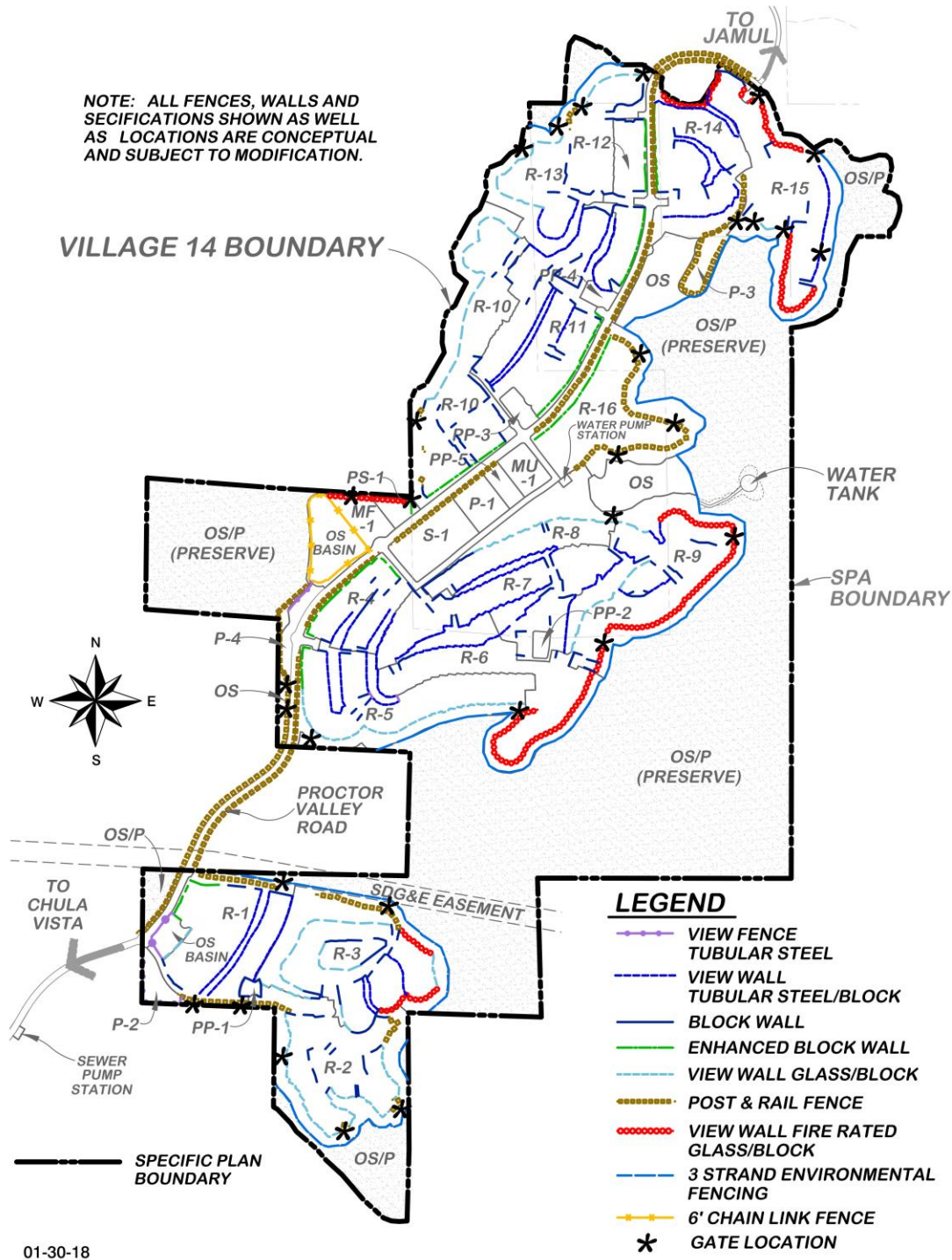
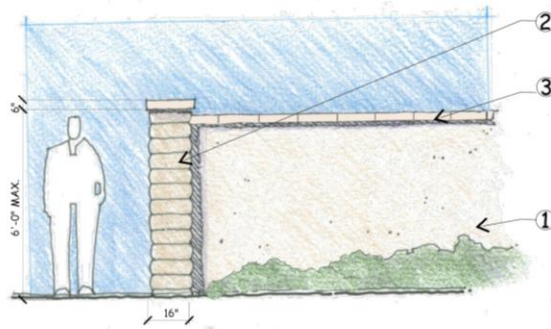


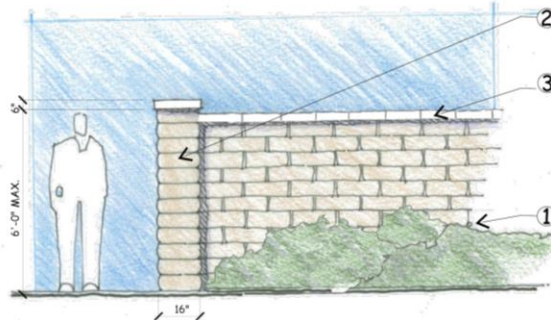
Exhibit 13 – Conceptual Wall & Fencing Plan



PERIMETER WALL AND PILASTER

LEGEND

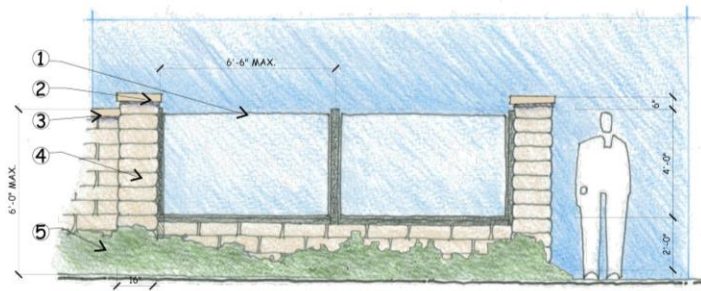
- ① SLUMP BLOCK - AVAIL. THROUGH ORCO BLOCK, WITH SACK FINISH
- ② 16" SQ SLUMPSTONE PILASTER
- ③ CAP



ENHANCED WALL AND PILASTER

LEGEND

- ① SLUMP BLOCK - AVAIL. THROUGH ORCO BLOCK COLOR LA PAZ
- ② 16" SQ SLUMPSTONE PILASTER
- ③ CAP

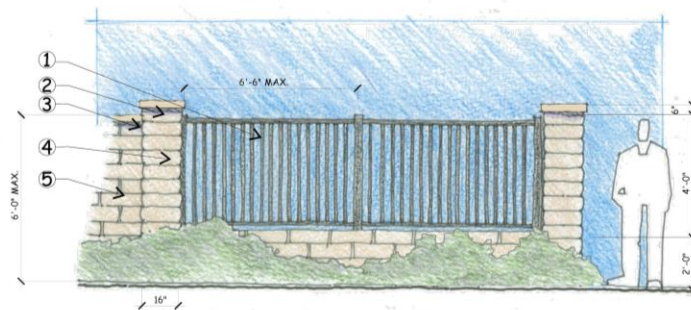


VIEW WALL WITH GLASS

LEGEND

- ① TEMPERED FIRE RATED GLASS
- ② 18" SQ. PILASTER CAP
- ③ 8" WIDE CONCRETE CAP
- ④ 16" SQ. SLUMPSTONE PILASTER
- ⑤ 6" WIDE SLUMPSTONE WALL

*Tempered Fire Rated Glass used in locations per Fire Protection Plan requirements.



VIEW WALL WITH TUBULAR STEEL

LEGEND

- ① TUBULAR STEEL
- ② 18" SQ. PILASTER CAP
- ③ 8" WIDE WALL CAP
- ④ 16" SQ. SLUMPSTONE PILASTER
- ⑤ 6" WIDE SLUMPSTONE WALL

Exhibit 14 – Typical Fence Details

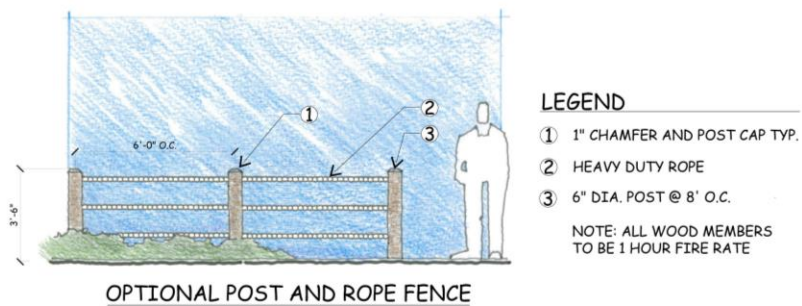
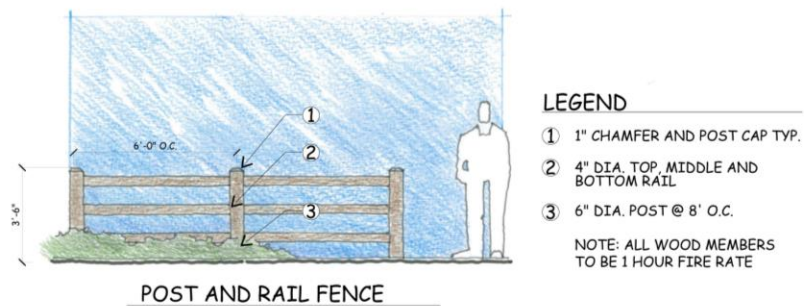
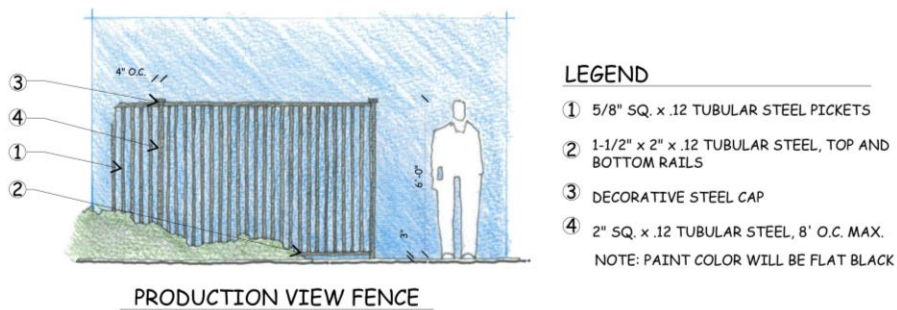


Exhibit 14 – Typical Wall Details (cont.)

E. BUFFERS

MSCP County Subarea Plan (Chapter 1, Section 1.10) Guideline:

E. There shall be no requirements for buffers outside the preserve system. All open space requirements for the preserve system shall be incorporated into the preserve system.

The MSCP County Subarea Plan also states in Chapter 3, Section 3.4.2 *Specific Project Requirements*:

Otay Ranch: Allowable uses for areas adjacent to the preserve are discussed in Policies 7.1-7.3 of the Otay Ranch RMP. The edge of the preserve is defined as a strip of land 100 feet wide that surrounds the perimeter of the Management Preserve.

Otay Ranch GDP/SRP Objective:

Identify allowable uses within appropriate land use designations for areas adjacent to the Preserve.

Otay Ranch RMP (Policy 7.1):

All development plans adjacent to the edge of the Preserve shall be subject to review and comment by the Preserve Owner/Manager, the City of Chula Vista, and the County of San Diego to assure consistency with resource protection objectives and policies.

Otay Ranch RMP (Policy 7.2):

The "edge" of the Preserve is a strip of land 100 feet wide that surrounds the perimeter of the Preserve. It is not a part of the Preserve, it is a privately or publicly owned area included in lots within the urban portion of Otay Ranch immediately adjacent to the Preserve.

Otay Ranch RMP (Policy 7.2) Standard:

"Edge Plans" shall be developed for all SPAs that contain areas adjacent to the Preserve.

Otay Ranch RMP (Policy 7.3):

Protect and maintain biological integrity of unconveyed land adjacent to developing SPAs.

Compliance:

Preparation of this Preserve Edge Plan fulfills the requirement to develop an "Edge Plan" for any Specific Plan Area adjacent to the Preserve and is subject to review and comment by the City of Chula Vista and County of San Diego, acting jointly as the POM. Uses within the 100' Preserve Edge will be privately or publicly owned and maintained. Consistent with RMP policies and MSCP County Subarea Plan guidelines, the Specific Plan will establish a 100' Preserve Edge, outside of the RMP Preserve. Refer to Chapter III, G. Temporary Construction Impacts to the RMP Preserve for additional information.

F. FUEL MODIFICATION ZONES

County MSCP Subarea Plan (Chapter 1, Section 1.11) Guidelines:

The following guidelines are intended to establish how the fuel modification zone will be managed.

- A. Plant materials existing within the fuel modification zone may be thinned, mowed, pruned and/or removed as necessary.
- B. Supplemental planting may be elected by the owner. Plant materials used shall be acceptable to the appropriate fire agency and non-invasive. This guideline also applies to any road cuts and/or graded/disturbed areas within the fuel modification zone.
- C. Ownership of the fuel modification zone may vary. In most cases, it may be by the adjacent lot owner or homeowners' association. Where appropriate, the zone may be incorporated into project open space and landscape plans.
- D. Responsibility for brush management will vary according to the specific requirements of the approved project. In most cases, it shall reside with the landowner or homeowners' association. For residential areas, the Codes, Covenants and Restrictions (CC&Rs) shall clearly define the responsibilities of the owner with respect to fuel modification including when and how such activities shall be carried out.
- E. Fencing, lighting and signage are permitted in the fuel modification zone, at the discretion of the landowners.
 - 1. Lighting shall be confined to areas necessary to ensure public safety, and shall be limited to low pressure sodium fixtures, shielded and directed away from the preserve.
 - 2. Fencing is desirable but not mandatory and provides a barrier to fire, invasive species, and uncontrolled human access. Should a landowner decide to install fencing anywhere within the brush management zone, the type, style and height must conform to existing regulations.

MSCP County Subarea Plan Guideline (Chapter 3, Section 3.4.3. Fuel Modifications)

General principles for design and management of the fuel modification zone are contained in Chapter 1, Section 1.11. Within the SCS [South County Segment], Otay Ranch is required to produce Fuel Management Zone Plans on a SPA by SPA basis. To the extent that these plans may effect preserve resources, they must be consistent with County MSCP standards.

Otay Ranch RMP (Policy 7.2) Guideline:

- 3) Fuel modification zones may be incorporated into the edge.

Compliance:

Fuel Modification Zones (FMZ) will be incorporated into the Development Areas pursuant to the requirements of the MSCP County Subarea Plan. Where appropriate, graded landscaped slope areas will be maintained pursuant to SDCFA requirements and will be outside of the RMP Preserve. A Fire Protection Plan (FPP) has been prepared and provides specific fuel modification requirements for the entire Specific Plan area. Consistent with the MSCP County Subarea Plan requirements, a 100' Fuel Modification Zone has been established and coincides with the 100' Preserve Edge. In addition to the 100' Fuel Modification Zone, rear yards on private lots are to be irrigated landscapes, extending the modified fuel areas by an average of 20 feet (Zone 1a). Any supplemental planting proposed by homeowners will be shown on landscape plans which are subject to review and approval of the Landscape/Architectural Committee, subject to the CC&Rs.

Refer to Exhibits 16a through 24 for the depiction of the Fuel Modification Zones.

Fuel Modification Zones:

Zone 1a: FMZ 1a is the first 20 feet (rear yard) from the structure to the lot line. This area will be included in the overall site reduced fuel zones. Homeowners will be responsible for ensuring that rear yard landscaping is compliant with the FPP. The Land Exchange Alternative's HOA will include an Architectural/Landscape Committee responsible for the review and approval of landscape plans and required to provide ongoing education to homeowners regarding fire adapted landscape maintenance.

Zone 1: Public and private areas located from the lot lines to 50 feet outward. These areas may be located on publicly maintained slopes, private open space lots, public streets, and/or private yards.

Some perimeter lots receive extended Zone 1 FMZs on manufactured slopes or internal fire-safe common area landscaping. These 100-foot-wide FMZs exceed the code requirement by providing low fuel densities and irrigated fuels for the entire 100 feet versus 50 feet of irrigated and 50 feet of non-irrigated thinned areas.

- This irrigated high plant moisture zone shall be serviced by a permanent, automatic irrigation system that keeps plants hydrated via efficient drip irrigation.
- No tree limbs shall encroach within 10 feet of a structure or chimney, including outside barbecues or fireplaces.
- Minimum of 10 feet between mature tree canopies.
- Additional trees (excluding prohibited or highly flammable species) may be planted as parkway trees on single loaded streets.
- 75% of all groundcovers and sprawling vine masses shall be limited to a maximum height of 18 inches.

- 25% of all groundcover and sprawling vine masses may reach a maximum height of 24 inches.
- Groundcovers must be of high-leaf moisture content.
- Shrubs shall be less than 2 feet tall and planted on 5-foot centers.
- Randomly placed approved succulent type plant material may exceed the height requirements, provided that they are spaced in groups of no more than three and a minimum of five feet away from described “clear access routes.”
- Vegetation/Landscape Plans within this zone shall be in compliance with the FPP.
- All planting must comply with the County’s Water Conservation in Landscaping Ordinance.

Zone 2: Public and private areas located between the outside edge of Zone 1 and 50 feet outward to a minimum 100 feet. These areas may be located on public slopes, private open space lots and public streets, and are subject to the criteria provided below:

- Represents a 50% thinning zone – 50% less fuel than on adjacent unmaintained RMP Preserve areas. Zone 2 areas will include removal of dead/dying vegetation, exotics, and plant species listed on the Prohibited Plant List (refer to FPP, Specific Plan Appendix 2 Removal of these components will result in 50% thinning of the existing fuels. As necessary to meet the 50% thinning objective, other plants will be removed to create a mosaic of vegetation with adequate spacing and discontinuity.
- All manufactured slopes within this area will be serviced by a temporary aboveground automatic irrigation system that will be turned off by the HOA or the County’s landscape monitoring firm once the plantings are established but will remain in place.
- Trees may be located within this zone, provided they are planted in clusters of no more than three. A minimum distance of no less than 20 feet shall be maintained between the tree cluster’s mature canopies.
- Only those trees on the Approved Plant List and those approved by a qualified biologist shall be allowed in this zone.
- 75% of all groundcover and sprawling vine masses may reach a maximum height of 36 inches.
- 25% of all groundcover and sprawling vine masses may reach a maximum height of 48 inches.
- Randomly placed approved succulent type plant material may exceed the height requirements, provided that they are spaced in groups of no more than three.

- Single specimen native shrubs, exclusive of chamise and sage, may be retained on 20-foot centers.

A more detailed description of the Fuel Modification Zone, including maintenance activities, planting programs, etc. is provided in the FPP. A portion of Zone 1 may be incorporated into streets, parks and other areas, as appropriate. Any proposed changes in the Fuel Modification Zone are subject to approval by the Development Services Director and SDFCA.

The 100' Preserve Edge coincides with the 100' Fuel Modification Zone in portions of the Development Area. Where the edge condition involves streets adjacent to the RMP Preserve, hard surface and irrigated landscaped areas would serve as wildland fire buffers, in accordance with any specific requirements of the FPP.

The irrigation design proposed for the Preserve Edge includes permanent irrigation within Fuel Modification Zone 1 (0-50 feet) and temporary irrigation in Zone 2 to ensure the establishment of vegetation intended to stabilize the slope and minimize erosion. Temporary irrigation is described below:

Zone 2 (51 – 100 feet) would be irrigated with above ground irrigation lines utilized only during plant establishment using sprinkler heads that spray 360 degrees. When the plants have become established, the sprinkler heads will be adjusted to provide adequate coverage within the upper 50 feet of the slope.

In the event the Land Exchange Alternative is approved by the Board of Supervisors, a Tentative Map condition will require Lots 11-18 in R-14 and Lots 22-24 in R-15 to provide a 100' FMZ (provided no vernal pool area is located within the 100'FMZ) or an equivalent combination of FMZ, alternative materials and methods to the satisfaction of the San Diego County Fire Authority. If required, at final engineering a redesign of the lot configuration in these areas to satisfy this condition will be allowed as an administrative approval under the authority of the San Diego County Fire Authority.

G. TEMPORARY CONSTRUCTION IMPACTS TO THE RMP PRESERVE

Otay Ranch RMP (Policy 7.3):

Protect and maintain biological integrity of unconveyed land adjacent to developing SPAs.

Otay Ranch RMP (Policy 7.3) Standards:

1. Provide temporary fencing around perimeter sensitive habitat areas and/or areas occupied by sensitive species adjacent to any SPA under construction to inhibit encroachment by construction traffic, etc.
2. Phase construction of SPAs immediately adjacent to sensitive biological resources to avoid indirect impacts. For example, construction activities that equal or exceed volume levels that inhibit breeding and nesting activities of the California gnatcatcher should be curtailed during the nesting period of the bird.

Compliance:

Otay Ranch RMP Policy 7.3, Standards 1 and 2 listed above to be implemented during construction activities adjacent to the RMP Preserve. Further, the EIR will analyze potential temporary direct and indirect impacts associated with construction activities, including impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; the introduction of chemical pollutants; noise; lighting; non-native invasive species; increased human activity; alteration of the natural fire regime; and shading. The EIR will include mitigation measures to mitigate potential significant impacts.

H. TYPICAL AND SPECIAL CONDITIONS AT THE PRESERVE EDGE

There are seven typical and two special conditions within the 100' Preserve Edge along the perimeter of Village 14 (refer to Exhibit 15 – Typical & Special Conditions within 100' Preserve Edge Per the Otay Ranch RMP Requirement). “Typical Conditions” (Conditions 1 through 8) at the Village 14 perimeter are a minimum of 100' and are located within the development footprint and outside of the RMP Preserve. These areas also serve as Fuel Modification Zones. There are two “Special Conditions” (Conditions 9 and 10) where the full 100' Preserve Edge is not provided due to adjacent vernal pool resources. The relationships between the land uses and the 100' Preserve Edge as required by the Otay Ranch RMP are depicted on Exhibits 16a through 24.

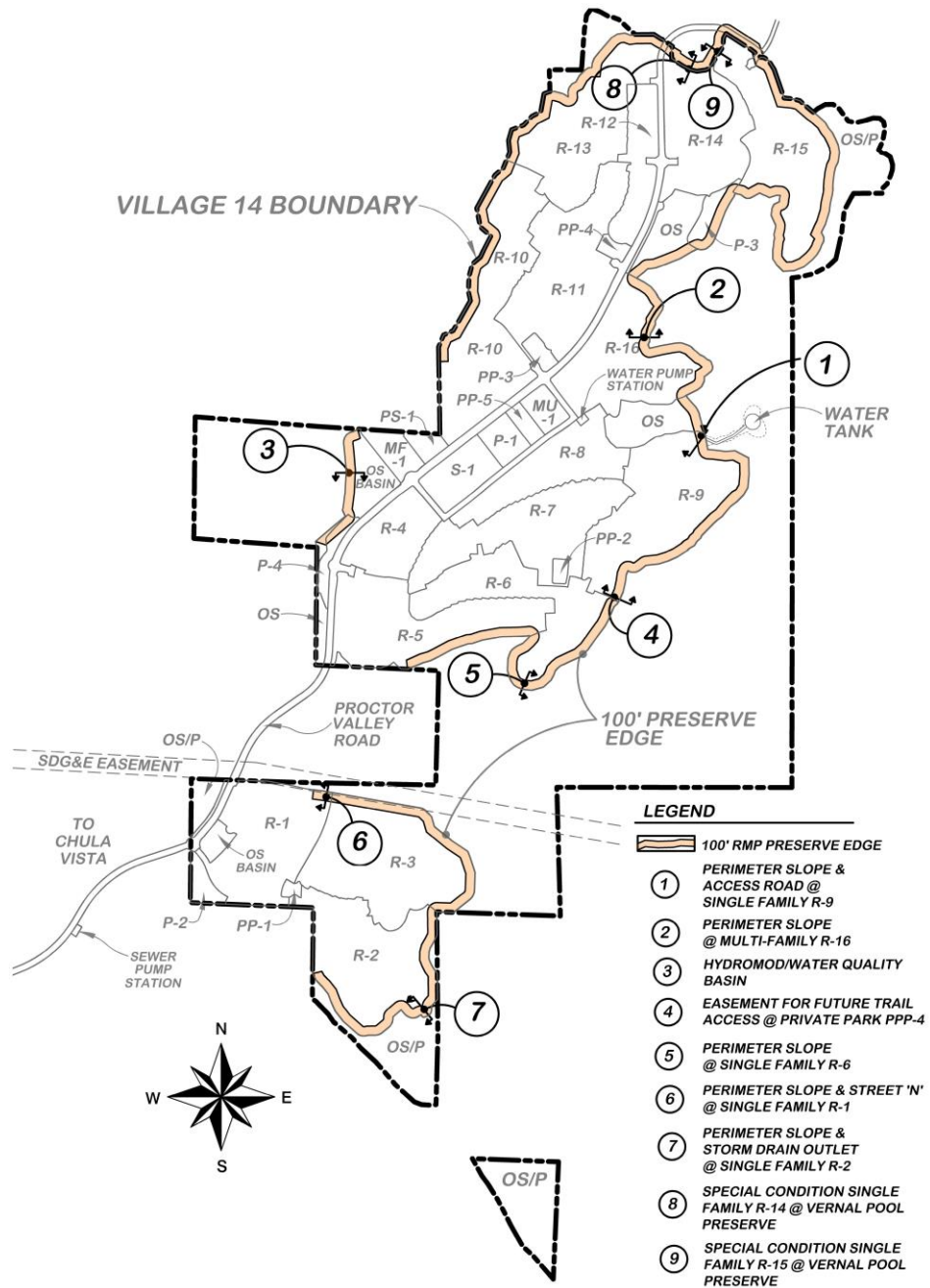


Exhibit 15 - Typical & Special Conditions within 100' Preserve Edge per the Otay Ranch RMP Requirements

PRESERVE EDGE PLAN

Otay Ranch Village 14 and Planning Areas 16/19 - Land Exchange EIR Alternative

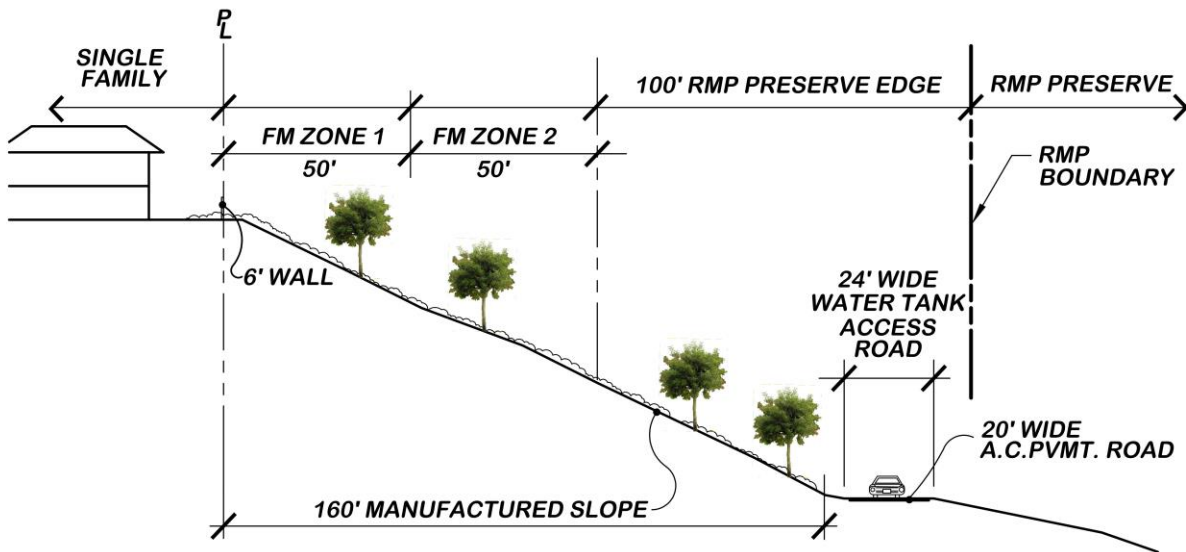


Exhibit 16 – Typical Condition 1 – Perimeter Slope & Access Road @ Single Family R-15

Not to scale

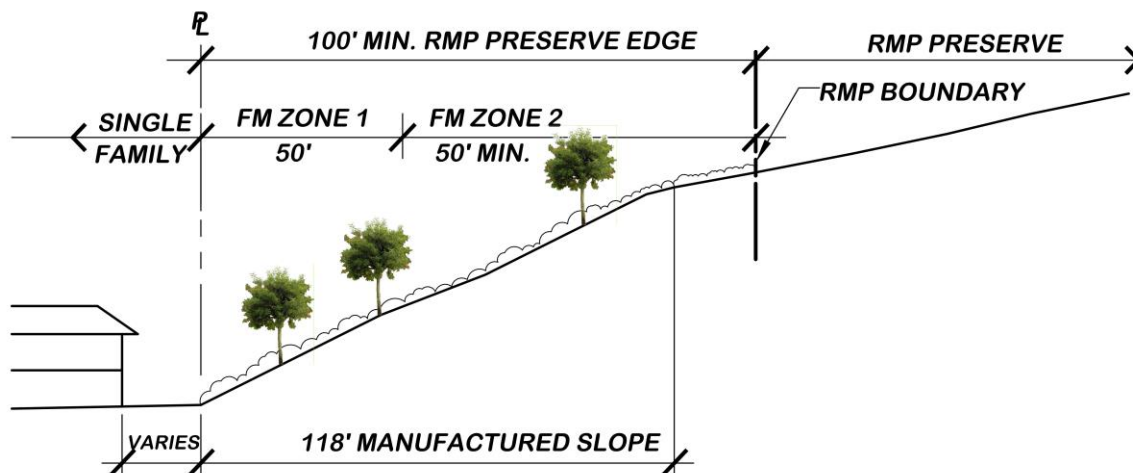


Exhibit 17 – Typical Condition 2 – Perimeter Slope @ Multi-Family R-16

Not to scale

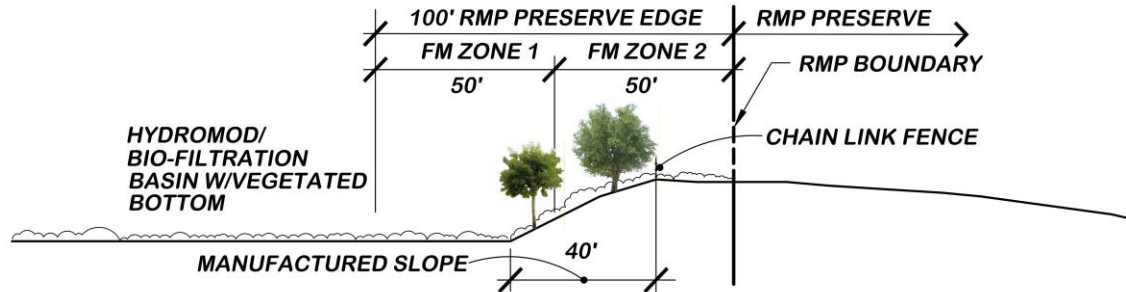


Exhibit 18 – Typical Condition 3 – Biofiltration Basin

Not to scale

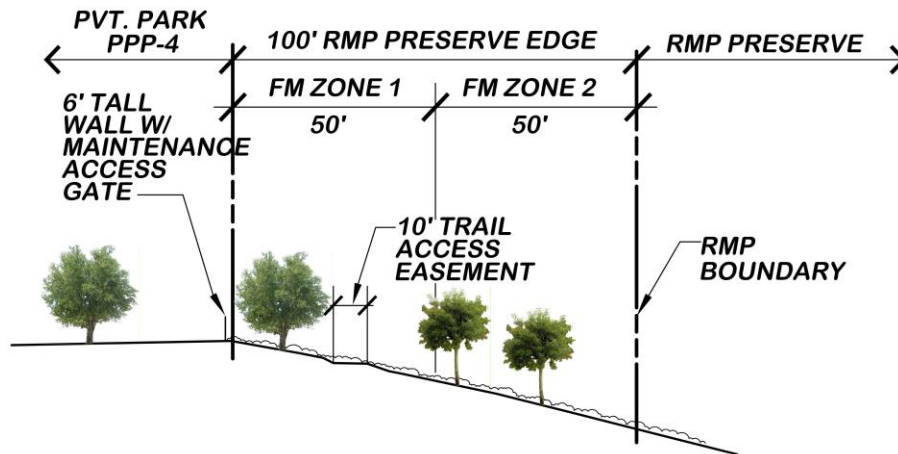


Exhibit 19 – Typical Condition 4 – Easement for Future Trail Access @ PPP-4

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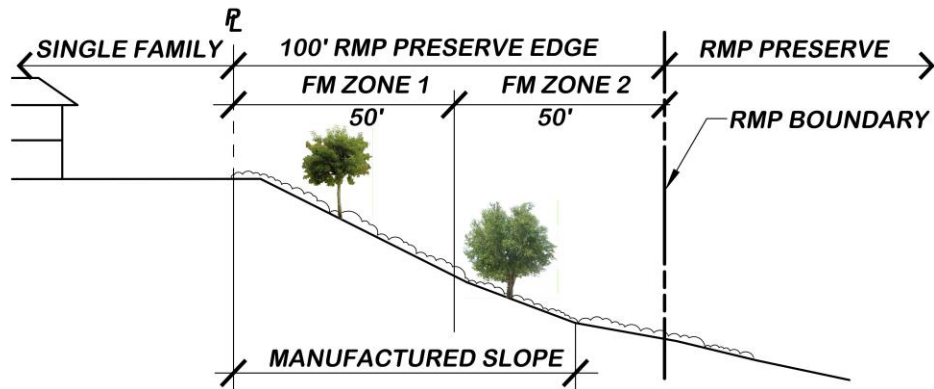


Exhibit 20 – Typical Condition 5 – Perimeter Slope @ Single Family R-6

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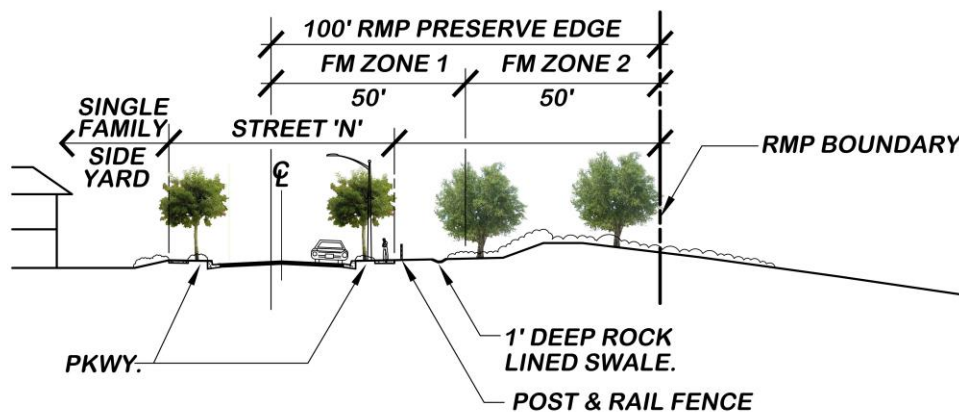


Exhibit 21 – Typical Condition 6 – Perimeter Slope * Street “N” @ Single Family R-1

Not to scale

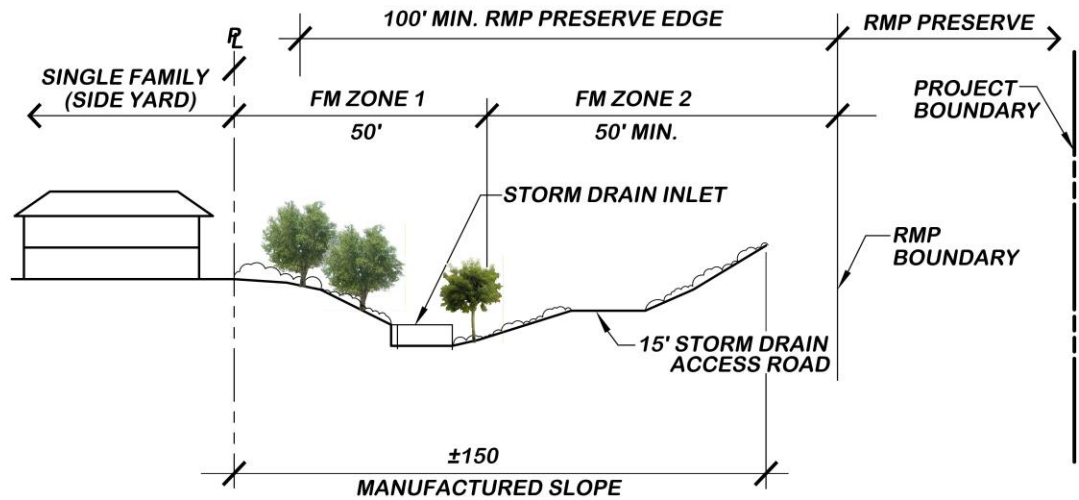


Exhibit 22 – Typical Condition 7 – Perimeter Slope & Storm Drain Outlet at
Single Family R-2

Not to scale

In the event the Land Exchange Alternative is approved by the Board of Supervisors, a Tentative Map condition will require Lots 11-18 in R-14 and Lots 22-24 in R-15 to provide a 100' FMZ (provided no vernal pool area is located within the 100'FMZ) or an equivalent combination of FMZ, alternative materials and methods to the satisfaction of the San Diego County Fire Authority. If required, at final engineering a redesign of the lot configuration in these areas to satisfy this condition will be allowed as an administrative approval under the authority of the San Diego County Fire Authority.

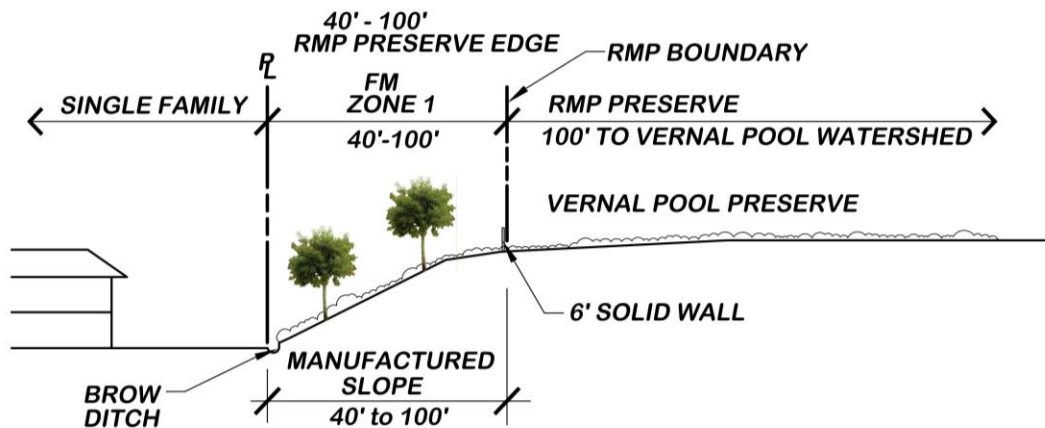


Exhibit 23 – **Special Condition 8 –Single Family R-14 @ Vernal Pool Preserve**

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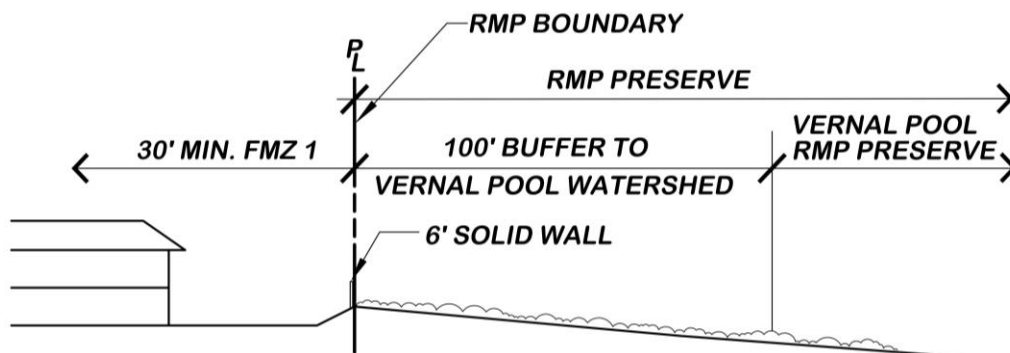


Exhibit 24 – **Special Condition 9 – Single Family R-15 @ Vernal Pool Preserve**

Not to scale

I. DRAINAGE

Otay Ranch RMP (Policy 2.13):

Design drainage improvements within identified floodplains to provide adequate flood protection and sensitivity to biological resources.

Standards:

- 1) Flood control plans shall be in conformance with RMP policies protecting sensitive resources and with State and Federal wetland regulations.
- 2) Concrete or rip-rap flood control channels shall be prohibited within the Preserve. Drop structures and armour lock structures shall be avoided. Minimal structural improvements may be permitted for road and utility crossing and for the protection of the public health, safety and general welfare.
- 3) Drainage improvement shall not result in an increase in erosion or sedimentation that would adversely affect Preserve resources.

Guidelines:

Detention basins and energy dissipators may be used.

Compliance:

The CEQA *Drainage Study* (“Drainage Plan”) and *Priority Development Project (PDP) Storm Water Quality Management Plan*, (“Water Quality Plan”) prepared by Hunsaker and Associates assessed the existing and developed drainage and water quality conditions in the Land Exchange Area. In conformance with the Otay Ranch GDP/SRP and Specific Plan requirements, the Drainage Plan provides the necessary hydrological studies, analysis and design solutions to provide appropriate urban runoff and water quality for the Land Exchange Area. Key elements of the Drainage Plan and Water Quality Plan are described below (refer to Exhibit 7 for Biofiltration Basin locations).

DRAINAGE

Pre-development and post development runoff from the Land Exchange Alternative is within the Otay Hydrologic Unit watershed.

- Proctor Valley is a natural conveyance system that empties into the Upper Otay Reservoir. In turn, the Upper Otay Reservoir empties into the Lower Otay Reservoir and Savage Dam. Attenuated runoff is released into the Otay River downstream of the dam.
- The Land Exchange Alternative will increase peak flows to Proctor Valley. However, flooding concerns are mitigated by the storage volume provided by the Otay Reservoir System. The City of San Diego has indicated opposition of any reduction in volume of runoff into the Lower Otay Reservoir and will impound the maximum amount of water possible.
- The drainage infrastructure serving Village 14 consists of storm drain, inlets, headwalls, biofiltration basins and cleanouts. The outlet structures throughout the

Land Exchange Area discharge directly into Proctor Valley. Structural BMPS must be shown on all landscape plans.

URBAN RUNOFF/WATER QUALITY

Development of the Specific Plan will implement necessary requirements for water quality as specified by the State and local agencies, including the County's Watershed Protection, Stormwater Management and Discharge Control Ordinance (WPO), the Jurisdiction Runoff Management Program and Model BMP Design Manual San Diego Region.

Prior to discharge into Proctor Valley from the developed portions of Village 14, runoff is treated in nine biofiltration basins at the downstream portions of the Development Area and along Proctor Valley Road, which will act to address both pollution control and flow control measures. Four proprietary biofiltration modular units (Modular Wetland Units) are proposed along Proctor Valley Road North. The BMPS were selected based on their effectiveness for pollutant removal and ability to also be utilized for flow control. As a pretreatment measure, proprietary flow-through treatment control BMPs are proposed immediately upstream for the two larger biofiltration basins.

In compliance with the most current County BMP Design Manual relative to the preservation of critical coarse sediment (CSS) and hydromodification, the Land Exchange Alternative identifies areas tributary to the Development Area which have potential critical coarse sediment and routes them through the Land Exchange Alternative. Attachment 2c of the SWQMP contains a map which overlays the County-generated Watershed Management Area Analysis (WMAA) Map with the Development Area and demonstrates that the CSS yield areas north of the development Area will be routed through the Development Area.

Regular maintenance activities within the biofiltration basins are anticipated four times a year (February, May, September and December). Rainy Season (February and December) and Pre-Rainy Season (September) maintenance activities include removal of trash, debris and excess sediment, clear clogged riser orifices and perform biofiltration basin area repairs. Post-Rainy Season maintenance includes full silt removal from the dry weather storage area, vegetation removal, annual inspections by a registered civil engineer, removal of trash, debris and excess sediment above the dry weather zone, clear clogged riser orifices and perform biofiltration basin area repairs. Additional maintenance may be required following major rainfall events unless the next regularly scheduled maintenance dates are within one month of the rain event. Access to the biofiltration basin will be provided for maintenance purposes.

No runoff from developed or impervious portions of Village 14 will outlet to directly Proctor Valley without prior water quality treatment. Some graded slopes along the Land Exchange Area's perimeter will be self-treating.

In addition to the permanent drainage facilities, temporary desiltation basins will be constructed within the Specific Plan area during each grading phase to control sedimentation during construction. The interim desiltation basins are designed to prevent discharge of sediment from the Land Exchange Alternative's grading operations into natural drainage channels and will be detailed in the Storm Water Pollution Prevention Plan (SWPPP) as required by the Construction General Permit from the State Water Resources Control Board. The exact size, location and component elements of these interim basins will be identified on the grading plans and SWPPP. Temporary, interim measures will occur within the Development Area and will be addressed in the SWPPP.

IV. BEST MANAGEMENT PRACTICES WITHIN THE 100' RMP PRESERVE EDGE

In addition to compliance with the Otay Ranch GDP/SRP, RMP and MSCP County Subarea Plan, the Specific Plan includes implementation of best management practices to reduce potential impacts of development on the RMP Preserve. Strategies related to toxic substances, irrigation, noise and invasive plant materials that will provide additional protections to the RMP Preserve. Each topic area is discussed below.

A. TOXIC SUBSTANCES

As described in greater detail in the *Water Quality Plan*, prepared by Hunsaker & Associates, the combination of proposed construction and permanent BMPs will reduce, to the maximum extent possible, the expected pollutants from the Land Exchange Alternative and will not adversely impact the beneficial uses of the receiving waters.

Pollutants generated during the construction of each grading phase will be controlled via BMP treatment strategies described within the SWPPP. The SWPPP will comply with the NPDES General Permit for Discharges associated with Construction Activities. The SWPP will provide guidance to prevent or effectively reduce pollutants prior to discharging from the Development Areas. Proposed construction phase BMPs will serve various purposes, including erosion control, sediment control, wind erosion control and tracking control, as well as management of non-storm water runoff and waste management controls.

Anticipated pollutants from the Land Exchange Alternative may include sediments, nutrients, heavy metals, organic compounds, trash and debris, oxygen demanding substances, oil and grease, bacteria and viruses and pesticides. Runoff from Village 14 will be transmitted via public storm drain to biofiltration basins located within the Land Exchange Area. Storm water pollutants are removed through physical and biological processes, including adsorption, filtration, plant uptake, microbial activity, decomposition, sedimentation and volatilization (EPA 1999). Adsorption is the process whereby particulate pollutants attach to soil (e.g., clay) or vegetation surfaces. Pollutants removed by adsorption include metals, phosphorus, and hydrocarbons. Filtration occurs as runoff passes through the bioretention area media, such as the sand bed, ground cover and planting soil. Treated water is released into the Otay River within 96 hours of capture. This system ensures that, to the greatest extent practicable, the RMP Preserve adjacent to the Land Exchange Area will not be impacted from toxic substances that may be generated from the Land Exchange Area.

B. IRRIGATION

Excessive runoff into the RMP Preserve from adjacent irrigated slopes will be prevented by implementation of BMPs to be installed prior to planting and watering to prevent siltation into the Preserve. The irrigation system installed on the slopes shall have an automatic shutoff valve to prevent erosion in the event the pipes break. Flow sensors to detect high flow conditions created by system damage or malfunction

and master shut-off valves shall be incorporated into the irrigation system design, as required by the County's Water Conservation in Landscaping Ordinance. Soil moisture probes located at the bottom and toe of side slopes of all vegetated biofiltration basins shall be included as an additional BMP to ensure that the irrigation controlled does not activate valves irrigating those areas during periods of inundation. Irrigation schedules for the slopes adjacent to the RMP Preserve must be evaluated and tested in the field to determine the appropriate water duration and irrigation adjustments, as necessary, to prevent excessive runoff.

These individual measures are water conserving, however when combined, water efficiency is extremely high, and waste and run-off virtually eliminated. Detailed irrigation plans will be prepared in conjunction with slope improvement plans and approved by the County's Landscape Architect.

C. NOISE

The EIR for the Land Exchange Alternative includes analyses of potential noise impacts to wildlife within the RMP Preserve. Mitigation measures will be required to mitigate potential significant noise impacts to wildlife to less than significant; refer to the EIR for specific mitigation measures.

D. INVASIVE PLANT MATERIALS

An Approved Plant List (Attachment "A") was prepared for the Land Exchange Alternative in consultation with a qualified biologist (Brock Ortega, Dudek) and an urban forestry and fire planning specialist (Michael Huff, Dudek). Landscape plans within the 100' Preserve Edge will not contain invasive species, consistent with the Approved Plant List. Landscape areas within the 100' Preserve Edge including, but not limited to, manufactured slopes, biofiltration basins, street-adjacent landscaping and public parks must comply with the Approved Plant List. The Approved Plant List is consistent with the requirements outlined in the FPP, as these areas are also within the 100' Fuel Modification Zone. Plants not listed in the Approved Plant List are prohibited within the 100' Preserve Edge. Proposed changes to the Approved Plant List must be reviewed by a qualified biologist and reviewed and approved by the Planning and Development Services Director and SDCFA. The area may be planted with container stock (liners) or a hydroseed mix. See the FPP for landscape planting and irrigation requirements.

In addition, a manual weeding program or the focused application of glyphosate shall be implemented on the manufactured slopes adjacent to the RMP Preserve to control weeds that are likely to be encouraged by irrigation within the 100' Preserve Edge/Fuel Modification Zone. Weed control efforts shall occur quarterly or as needed, to provide weed control to ensure that no invasive species migrate into the adjacent RMP Preserve. Weed monitoring is required during the plant establishment period (typically two to three years for shrubs and up to five years for trees) to prevent weeds on the manufactured slopes from spreading into the adjacent RMP Preserve. Either the HOA or the County's landscape monitoring firm will be

responsible to check the irrigated slopes during plant establishment to verify that excessive runoff does not occur and that any weed infestations are controlled.

IV. CITY OF SAN DIEGO MSCP SUBAREA PLAN - LAND USE ADJACENCY GUIDELINE COMPLIANCE

A portion of Village 14 is adjacent to properties identified in the City of San Diego MSCP Subarea Plan as “Cornerstone Properties.” These MSCP Preserve areas are limited to the southern edge of Central Village 14 and the western edge of South Village 14, (refer to Exhibit 2, Village 14 Context). Portions of single family neighborhoods R-1, R-2 and R-5 and portions of neighborhood parks P-1 and P-4 are adjacent to the City of San Diego MSCP Subarea Plan Preserve (refer to Exhibit 25, Village 14 Development Areas Adjacent to the City of San Diego MSCP Preserve). Though these areas are not subject to RMP Preserve Edge Plan requirements discussed above, they are subject to City of San Diego MSCP Subarea Plan, Section 1.4.3, Land Use Adjacency Guidelines. Each applicable guideline is listed below and followed by an explanation of how the Land Exchange Alternative complies with the guidelines.

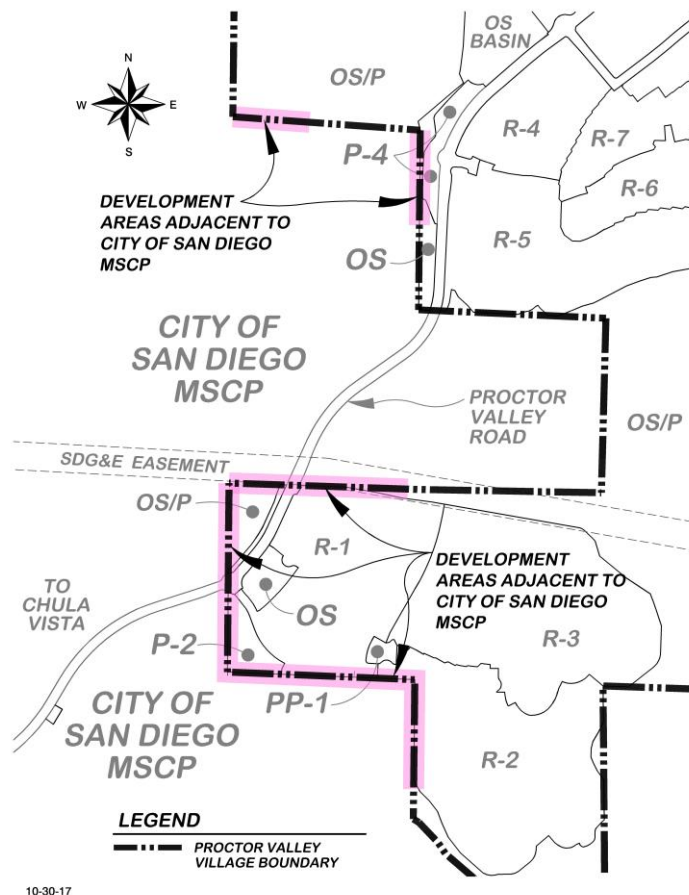


Exhibit 25 – Village 14 Development Areas Adjacent to City of San Diego
MSCP Subarea Plan Preserve

Not to scale

The City of San Diego Multi-Habitat Planning Area (MHPA) is the planned habitat preserve within the City of San Diego MSCP Subarea. The City of San Diego MSCP Subarea Plan is the regional program through which the MHPA will be assembled as each participating jurisdiction implements their portion of the City of San Diego MSCP. The MSCP Plan regional preserve for southwestern San Diego County is targeted at 172,000 acres.

The following excerpt from the City of San Diego MSCP Subarea Plan, Section 1.4.3, Land Use Adjacency Guidelines is provided to guide the land uses adjacent to the MHPA:

1.4.3. Land Use Adjacency Guidelines

Land uses planned or existing adjacent to the MHPA include single family, multiple family residential, active recreation, commercial, industrial, agricultural, landfills, and extractive uses. Land uses adjacent to the MHPA will be managed to ensure minimal impacts to the MHPA. Consideration will be given to good planning principles in relation to adjacent land uses as described below. The following are adjacency guidelines that will be addressed, on a project-by-project basis, during either the planning (new development) or management (new and existing development) stages to minimize impacts and maintain the function of the MHPA.

A. DRAINAGE

City of San Diego MSCP Guideline:

1 - All new and proposed parking lots and developed areas in and adjacent to the preserve must not drain directly into the MHPA. All developed and paved areas must prevent the release of toxins, chemical, petroleum products, exotic plant materials and other elements that might degrade or harm the natural environment or ecosystem processes within the MHPA. This can be accomplished using a variety of methods including natural detention basins, grass swales or mechanical trapping devices. These systems should be maintained approximately once a year, or as often as needed, to ensure proper functioning. Maintenance should include dredging out sediments if needed, removing exotic plant materials, and adding chemical-neutralizing compounds (e.g., clay compounds) when necessary and appropriate.

Compliance:

The Drainage Plan and Water Quality Plan prepared by Hunsaker and Associates assessed the existing and developed drainage and water quality conditions in the Land Exchange Area. In conformance with the Otay Ranch GDP/SRP and Specific Plan requirements, the Drainage Plan provides the necessary hydrological studies, analysis and design solutions to provide appropriate urban runoff and water quality for the Land Exchange Area. Key elements of the Drainage Plan and Water Quality Plan are described below. Refer to Exhibit 7 for Biofiltration Basin locations.

DRAINAGE

Pre-development and post development runoff from the Land Exchange Alternative is within the Otay Hydrologic Unit watershed.

- Proctor Valley is a natural conveyance system that empties into the Upper Otay Reservoir. In turn, the Upper Otay Reservoir empties into the Lower Otay Reservoir and Savage Dam. Attenuated runoff is released into the Otay River downstream of the dam.
- The Land Exchange Alternative will increase peak flows to Proctor Valley. However, flooding concerns are mitigated by the storage volume provided by the Otay Reservoir System. The City of San Diego has indicated opposition of any reduction in volume of runoff into the Lower Otay Reservoir and will impound the maximum amount of water possible.
- The drainage infrastructure serving Village 14 consists of storm drain, inlets, headwalls, biofiltration basins and cleanouts. The outlet structures throughout the Land Exchange Area discharge directly into Proctor Valley. Structural BMPS must be shown on all landscape plans.

URBAN RUNOFF/WATER QUALITY

Development of the Specific Plan will implement necessary requirements for water quality as specified by the State and local agencies, including the County's Watershed Protection, Stormwater Management and Discharge Control Ordinance (WPO), the Jurisdiction Runoff Management Program and Model BMP Design Manual San Diego Region.

Prior to discharge into Proctor Valley from the developed portions of Village 14, runoff is treated in nine biofiltration basins at the downstream portions of the Development Area and along Proctor Valley Road, which will act to address both pollution control and flow control measures. four proprietary biofiltration modular units (Modular Wetland Units) are proposed along Proctor Valley Road North and four biofiltration areas would be located within the Development Area. The BMPS were selected based on their effectiveness for pollutant removal and ability to also be utilized for flow control. As a pretreatment measure, proprietary flow-through treatment control BMPs are proposed immediately upstream for the two larger biofiltration basins.

In compliance with the most current County BMP Design Manual relative to the preservation of critical coarse sediment (CSS) and hydromodification, the Land Exchange Alternative identifies areas tributary to the Development Area which have potential critical coarse sediment and routes them through the Land Exchange Alternative. Attachment 2c of the SWQMP contains a map which overlays the County-generated Watershed Management Area Analysis (WMAA) Map with the Development Area and demonstrates that the CSS yield areas north of the development Area will be routed through the Development Area.

Regular maintenance activities within the biofiltration basins are anticipated four times a year (February, May, September and December). Rainy Season (February and December) and Pre-Rainy Season (September) maintenance activities include removal of trash, debris and excess sediment, clear clogged riser orifices and perform biofiltration basin area repairs. Post-Rainy Season maintenance includes full silt removal from the dry weather storage area, vegetation removal, annual inspections by a registered civil engineer, removal of trash, debris and excess sediment above the dry weather zone, clear clogged riser orifices and perform biofiltration basin area repairs. Additional maintenance may be required following major rainfall events unless the next regularly scheduled maintenance dates are within one month of the rain event. Access to the biofiltration basin will be provided for maintenance purposes.

No runoff from developed or impervious portions of Village 14 will outlet directly to Proctor Valley without prior water quality treatment. Some graded slopes along the Land Exchange Area's perimeter will be self-treating.

In addition to the permanent drainage facilities, temporary desiltation basins will be constructed within the Specific Plan area during each grading phase to control sedimentation during construction. The interim desiltation basins are designed to prevent discharge of sediment from the Land Exchange Alternative's grading operations into natural drainage channels and will be detailed in the Storm Water Pollution Prevention Plan (SWPPP) as required by the Construction General Permit from the State Water Resources Control Board. The exact size, location and component elements of these interim basins will be identified on the grading plans and SWPPP. Temporary, interim measures will occur within the Development Area and will be addressed in the SWPPP.

B. TOXICS

City of San Diego MSCP Guideline:

2 - Land uses, such as recreation and agriculture, that use chemicals or generate by-products such as manure, that are potentially toxic or impactful to wildlife, sensitive species, habitat, or water quality need to incorporate measures to reduce impacts caused by the application and/or drainage of such materials into the MHPA. Such measures should include drainage/detention basins, swales, or holding areas with non-invasive grasses or wetland-type vegetation to filter out the toxic materials. Regular maintenance should be provided. Where applicable, this requirement should be incorporated into leases on publicly owned property as leases come up for renewal.

Compliance:

As described in greater detail in the *Water Quality Management Report*, prepared by Hunsaker & Associates, the combination of proposed construction and permanent BMPs will reduce, to the maximum extent possible, the expected pollutants from the Land Exchange Alternative and will not adversely impact the beneficial uses of the receiving waters.

Anticipated pollutants from the Land Exchange Alternative may include sediments, nutrients, heavy metals, organic compounds, trash and debris, oxygen demanding substances, oil and grease, bacteria and viruses and pesticides. Runoff from the Village 14 Development Area will be transmitted via public storm drain to biofiltration basins located within the Land Exchange Area. Storm water pollutants are removed through physical and biological processes, including adsorption, filtration, plant uptake, microbial activity, decomposition, sedimentation and volatilization (EPA 1999). Adsorption is the process whereby particulate pollutants attach to soil (e.g., clay) or vegetation surfaces. Pollutants removed by adsorption include metals, phosphorus, and hydrocarbons. Filtration occurs as runoff passes through the bioretention area media, such as the sand bed, ground cover and planting soil. Treated water is released into the Otay River within 96 hours of capture. This system ensures that, to the greatest extent practicable, MSCP Preserve areas adjacent to Village 14 will not be impacted from toxic substances that may be generated from the Land Exchange Area. Construction BMPs will be described in the SWPPP.

C. LIGHTING

City of San Diego MSCP Guideline:

3- Lighting of all developed areas adjacent to the MHPA should be directed away from the MHPA. Where necessary, development should provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the MHPA and sensitive species from night lighting.

Compliance:

The Village 14 Design Plan includes criteria for the design of lighting for Village 14, including areas adjacent to the MSCP Preserve. Improvement plans for the areas adjacent to the Preserve include shielded lighting designs that avoid spillover light in the MSCP Preserve. Lighting Plans and a photometric analysis shall be prepared in conjunction with improvement plans for development areas adjacent to the MSCP Preserve to illustrate the location of proposed lighting standards and type of shielding measures. Lighting Plans and accompanying photometric analyses must also be prepared in conjunction with streets, public parks and other improvements proposed adjacent to the MSCP Preserve to demonstrate that light spillage into the MSCP Preserve is avoided to the greatest extent possible. Nighttime lighting is not proposed within public parks. The County Parks and Recreation Department will control and enforce hours of operation (generally dawn to dusk) within public parks.

D. NOISE

City of San Diego MSCP Guideline:

4 - Uses in or adjacent to the MHPA should be designed to minimize noise impacts. Berms or walls should be constructed adjacent to commercial areas, recreational areas, and any other use that may introduce noises that could impact or interfere with wildlife utilization of the MHPA. Excessively noisy uses or activities adjacent to breeding areas must incorporate noise reduction measures and be curtailed during the breeding season of sensitive species. Adequate noise reduction measures should also be incorporated for the remainder of the year.

Compliance:

Portions of two neighborhood parks (P-2 and P-4) are located adjacent to the City of San Diego MSCP Preserve. Specific noise attenuation measures will be designed in conjunction with the preparation of park improvement plans. Park concept plans have been designed to orient active uses away from the MSCP Preserve to the greatest extent possible given site design constraints. See EIR for mitigation measures incorporated during construction that address construction noise adjacency issues. When single family homes are located adjacent to the City of San Diego MSCP Subarea Plan Preserve, 6' high solid walls (refer to Exhibits 13 and 14) to be constructed at the rear property line. A 100' buffer area will provide additional noise attenuation.

E. BARRIERS

City of San Diego MSCP Guideline:

5 - New development adjacent to the MHPA may be required to provide barriers (e.g., non-invasive vegetation, rocks/boulders, fences, walls, and/or signage) along the MHPA boundaries to direct public access to appropriate locations and reduce domestic animal predation.

Compliance

The Specific Plan provides access to MSCP Preserve at designated locations (refer to Exhibit 13, Conceptual Wall & Fencing Plan). Walls will be constructed outside the MSCP Preserve, within the Fuel Modification Zone and will be maintained by the Master HOA or the County's landscape monitoring firm.

Access to the Fuel Modification Zone for maintenance and fire protection activities is provided approximately every 1,000' along the perimeter (refer to Exhibit 13, Conceptual Wall & Fencing Plan). Perimeter walls are intended to create a barrier between the Development Area and the MSCP Preserve. Signage, identifying the MSCP Preserve and notifying the public of access restrictions, will be provided at key locations along the perimeter of the Development Area.

F. INVASIVES

City of San Diego MSCP Guideline:

6 - No invasive non-native plant species shall be introduced into areas adjacent to the MHPA.

Compliance

An Approved Plant List (Attachment "A") was prepared for the Land Exchange Alternative in consultation with a qualified biologist (Brock Ortega, Dudek) and an urban forestry and fire protection planner (Michael Huff, Dudek). Landscape areas adjacent to the MSCP Preserve, including, but not limited to, manufactured slopes, biofiltration basins, street-adjacent landscaping, public parks must comply with the Approved Plant List. The Approved Plant List is consistent with the requirements outlined in the FPP, as these areas are also within the 100' Fuel Modification Zone. Proposed changes to the Approved Plant List must be reviewed by a qualified biologist and reviewed and approved by the County's Landscape Architect and SDCFA. The area may be planted with container stock (liners) or a hydroseed mix. Refer to the FPP for landscape planting and irrigation requirements.

In addition, a manual weeding program or the focused application of glyphosate shall be implemented on the manufactured slopes adjacent to the Preserve to control weeds that are likely to be encouraged by irrigation within the Fuel Modification Zone. Weed control efforts shall occur quarterly or as needed, to provide weed control to ensure that no invasives migrate into the adjacent MSCP Preserve. Weed monitoring is required during the plant establishment period (typically two to three years for shrubs and up to five years for trees) to prevent weeds on the manufactured slopes from spreading into the adjacent MSCP Preserve. Either the HOA or the County's landscape monitoring firm will be responsible to verify that excessive runoff does not occur and that any weed infestations are controlled.

G. BRUSH MANAGEMENT

City of San Diego MSCP Guideline:

7 - New residential development located adjacent to and topographically above the MHPA (e.g., along canyon edges) must be set back from slope edges to incorporate Zone 1 brush management areas on the development pad outside of the MHPA. Zones 2 and 3 will be combined into one zone (Zone 2) and may be located in the MHPA upon granting of an easement to the City (or other acceptable agency) except where narrow wildlife corridors require it to be located outside the MHPA. Zone 2 will be increased by 30 feet, except in areas with a low fire hazard severity rating where no Zone 2 would be required. Brush management zones will not be greater in size that is currently required by the City's regulations. The amount of woody vegetation clearing shall not exceed 50 percent of the vegetation existing when the initial clearing is done. Vegetation clearing shall be done consistent with City standards and shall avoid/minimize impacts to covered species to the maximum extent possible. For all new development, regardless of the ownership, the brush management in the Zone 2 area will be the responsibility of an HOA or other private party.

Compliance

The FPP establishes a 100' Fuel Modification Zone (Brush Management Zone) along the perimeter of the Village 14 Development Area. The Fuel Modification Zone is located outside of the MSCP Preserve and consists of two 50' zones (Zone 1 and 2). Refer to Section C. - Compliance with RMP Policies and City of San Diego MSCP Subarea Plan Guidelines, 7. Fuel Modification Zones for additional requirements and restrictions.

H. GRADING/LAND DEVELOPMENT

City MSCP Guideline:

8 - Manufactured slopes associated with site development shall be included within the development footprint for projects within or adjacent to the MHPA.

Compliance

As depicted on the Preliminary Grading Plan/Tentative Map, manufactured slopes are included within the Development Area. Manufactured slopes are established as separate open space lots on the Tentative Map and will be maintained by a Master HOA or the County's landscape monitoring firm.

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ATTACHMENT “A”

APPROVED PLANT LIST
FEBRUARY 2018

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APPROVED PLANT LIST

FEBRUARY 2018

RMP Preserve Interface/Transitional areas

(100' FMZ/ 100' Preserve Edge - slopes adjacent to open space, slope transition for ornamental to open space)

TREES

	<u>Common Name</u>	<u>Height at Maturity</u>
Quercus agrifolia	Coast Live Oak	50'
Arbutus unedo	Strawberry Tree	25'
Rhus ovata	Sugar Bush	12'

SHRUBS

Agave attenuata	Century Plant
Agave shawii*	Coastal Agave
Archostapylos Emerald Carpet	Emerald Carpet Manzanita
Baccharis pilularis	Dwarf Coyote Bush
Ceanothus species	Carmel Creeper
Cistus species	Rock Rose
Cotoneaster dammeri 'Lowfast'	Bearberry Cotoneaster
Dalea orcuttii	Baja Indigo Bush
Epilobium californicum	California Fushcia
Heteromeles arbutifolia	Toyon
Leymus c. 'Canyon Prince'	Canyon Prince Wild Rye
Mimulus auranticus	Monkey Flower
Myoporum parvifolium Putah Creek	No Common Name
Rhamnus californica	California Coffeeberry
Rhus lentii	Pink Flowering Sumac
Sambucus species	Elderberry
Yucca schidigera	Mojave Yucca
Yucca whipplei	Foothill Yucca

GROUND COVER

Baccharis pilularis 'pigeon point'	Coyote Bush
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HYDROSEED MIX:

Dichelostemma capitatum	Wild-Hyacinth
Distichlis spicata	Salt Grass
Dudleya edulis	Lady's Fingers
Dudleya pulverulenta	Chalk Duleya
Lasthenia californica	Goldfields
Layia platyglossa	Tidy Tips
Lupinus bicolor	Miniature Lupine
Sisyrinchium bellum	Blue-Eyed Grass

Hydromodification/ Biofiltration Basins

TREES

	<u>Common Name</u>	<u>Height at Maturity</u>
<i>Alnus rhombifolia</i>	White Adler	40' to 70'
<i>Plantanus racemose</i>	California Sycamore	40' to 70'
<i>Safix lasioeopsis</i>	Arroyo Willow	35'
<i>Salix lucida</i>	Lance-Leaf Willow	40'
<i>Sambucus Mexicana</i>	Blue Elderberry	20'

SHRUBS/GROUNDCOVER

<i>Achillea millefolium</i>	Yarrow
<i>Agrostis palens</i>	Thingrass
<i>Anemopsis californica</i>	Yerba Manza
<i>Carex preaeagricillis</i>	California Field Sedge
<i>Distichlis spicate</i>	Salt Grass
<i>Eleocharis macrostachya</i>	Pale Spike Rush
<i>Festuca californica</i>	California Fescue
<i>Festuca rubra</i>	Creeping Red Fescue
<i>Iva Hayesiana</i>	Hayes Iva
<i>Jucus patens</i>	California Gray Rush
<i>Juncus acutus</i>	Spiny Rush
<i>Juncus Mexicana</i>	Mexican Rush
<i>Leymus condenstatus</i> 'Canyon Prince'	Canyon Prince Wild Rye
<i>Mahonia nevinii</i>	Nevin's Barberry
<i>Plantago insularus</i>	Desert Indianwheat
<i>Ribes Speciosum</i>	Fushia Flowering Goose
<i>Scripus cenuus</i>	Low Bullrush
<i>Sisyrinchium bellum</i>	Blue-eyed Grass

HYDROSEED MIX:

<i>Artemisia douglasiana</i>	Mugwort
<i>Isocoma menziesii</i>	Goldenbush
<i>Iva hayesiana</i>	San Diego Marsh Elder
<i>Sisyrinchium bellum</i>	Blue Eyed Grass

NOTES:

1. The Approved Plant List has been reviewed by Brock Ortega, Biologist (Dudek) and Michael Huff, Urban Forester & Fire Protection Planner (Dudek).
2. As verified by the Applicant's biologist, all species included in the Approved Plant List are native to California and occur naturally and frequently in San Diego County.
3. Unless listed in the Approved Plant List, all other plant materials are prohibited.
4. All proposals to utilize plant materials not listed in the Approved Plant List are subject to review and approval by the County of San Diego (Development Services and Fire Departments).
5. All California native plants and seeds planted within 100 feet of the RMP Preserve shall have origins from cismontane San Diego County.
6. All plants would benefit from some supplemental irrigation during hot summer months, particularly those utilized on biofiltration basin side slopes and further inland.
7. All trees should be planted a minimum of 10 feet from drain pipes and structures.